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WESTERN AMERICANA

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WESTON'S GUIDE

TO THE

KANSAS PACIFIC RAILWAY.

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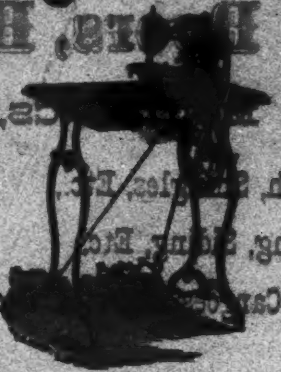

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Sash, Doors, Blinds,

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Lumber, Lath, Shingles, Etc.,
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We have the Largest Establishment in our Line in this Country.

OUR WORK IS EXCELLED BY NONE.

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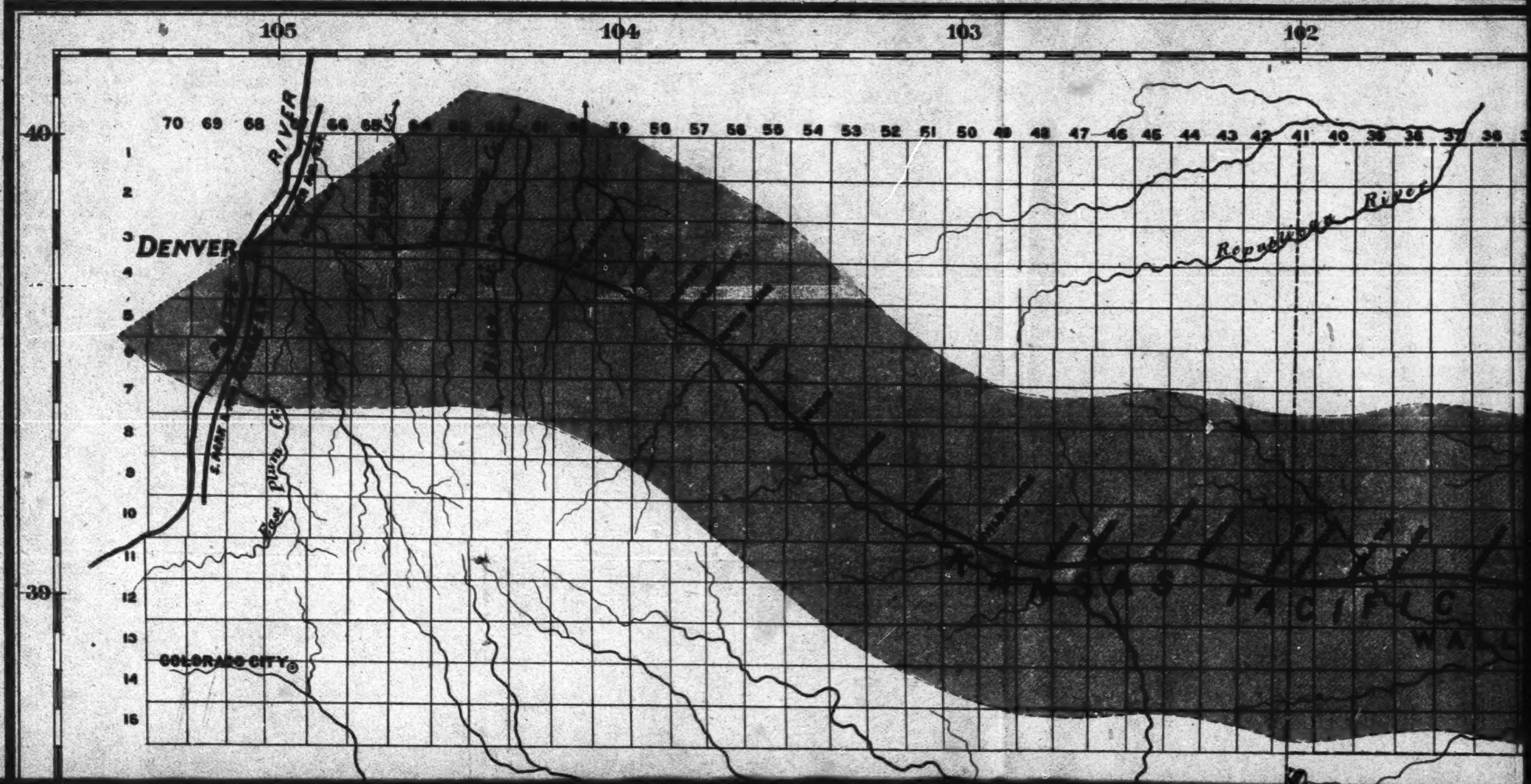
LAND MAP OF THE K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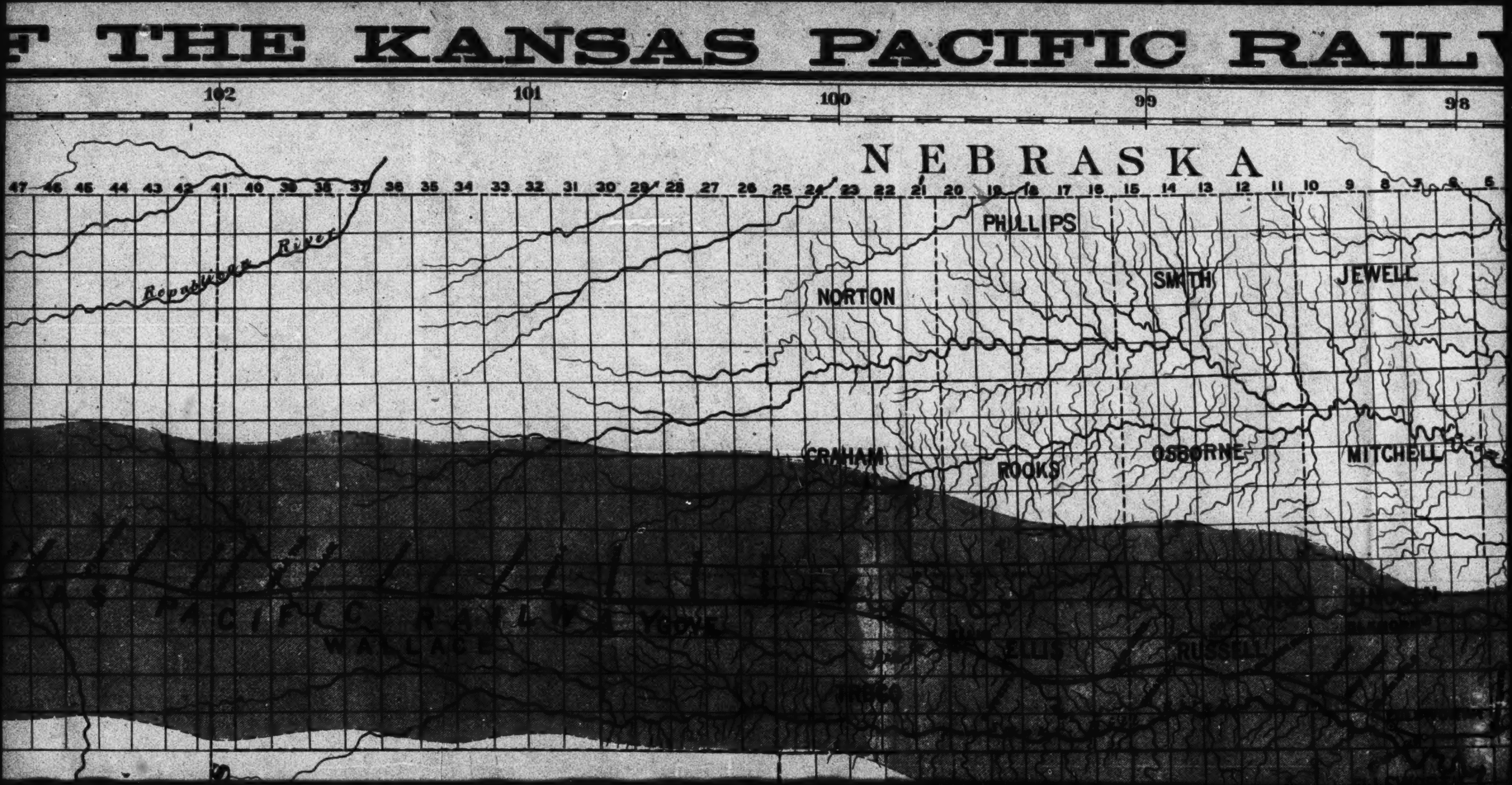
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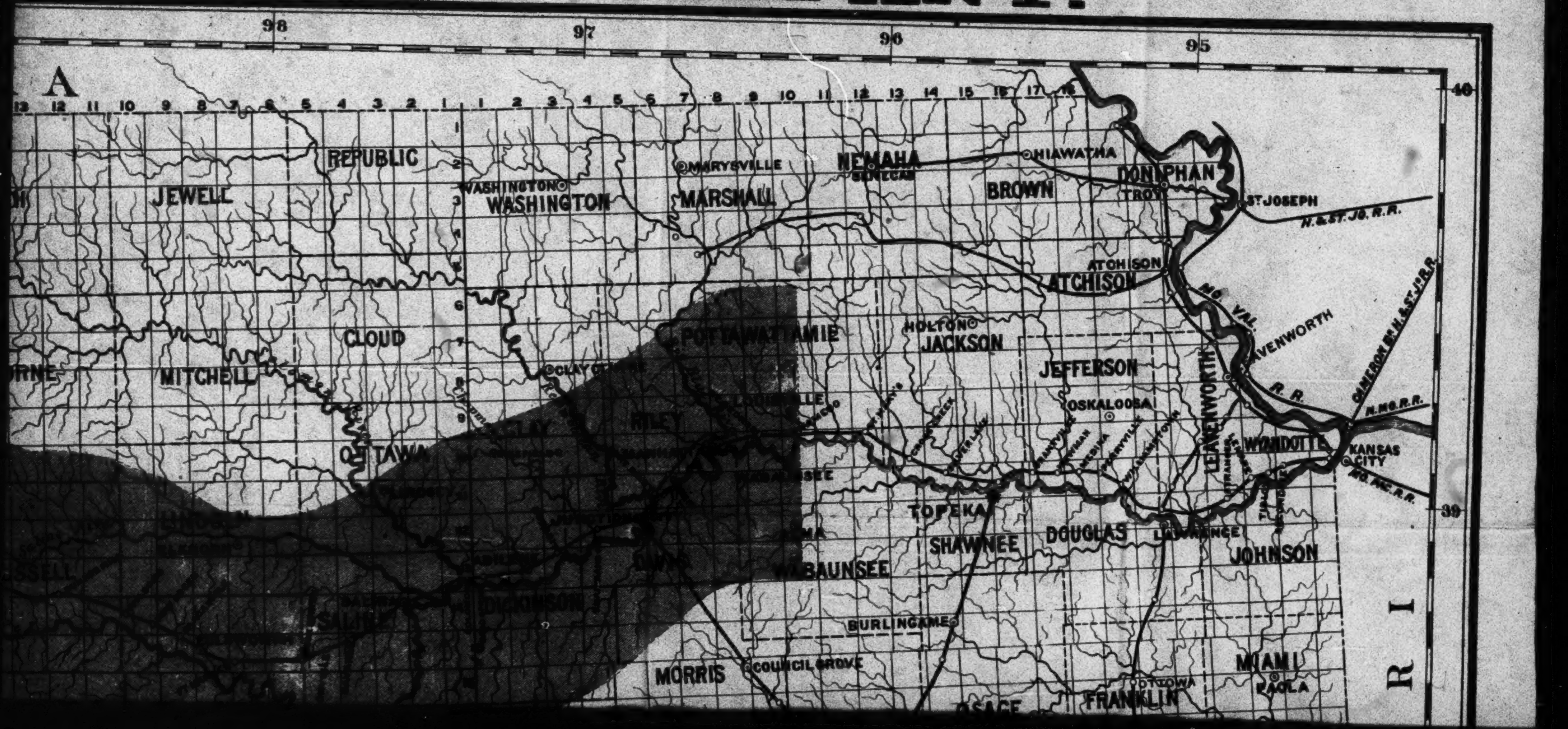
RAILWAY COMPANY.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KANSAS CITY
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OTTAWA
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WABAUNSEE
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DOUGLAS
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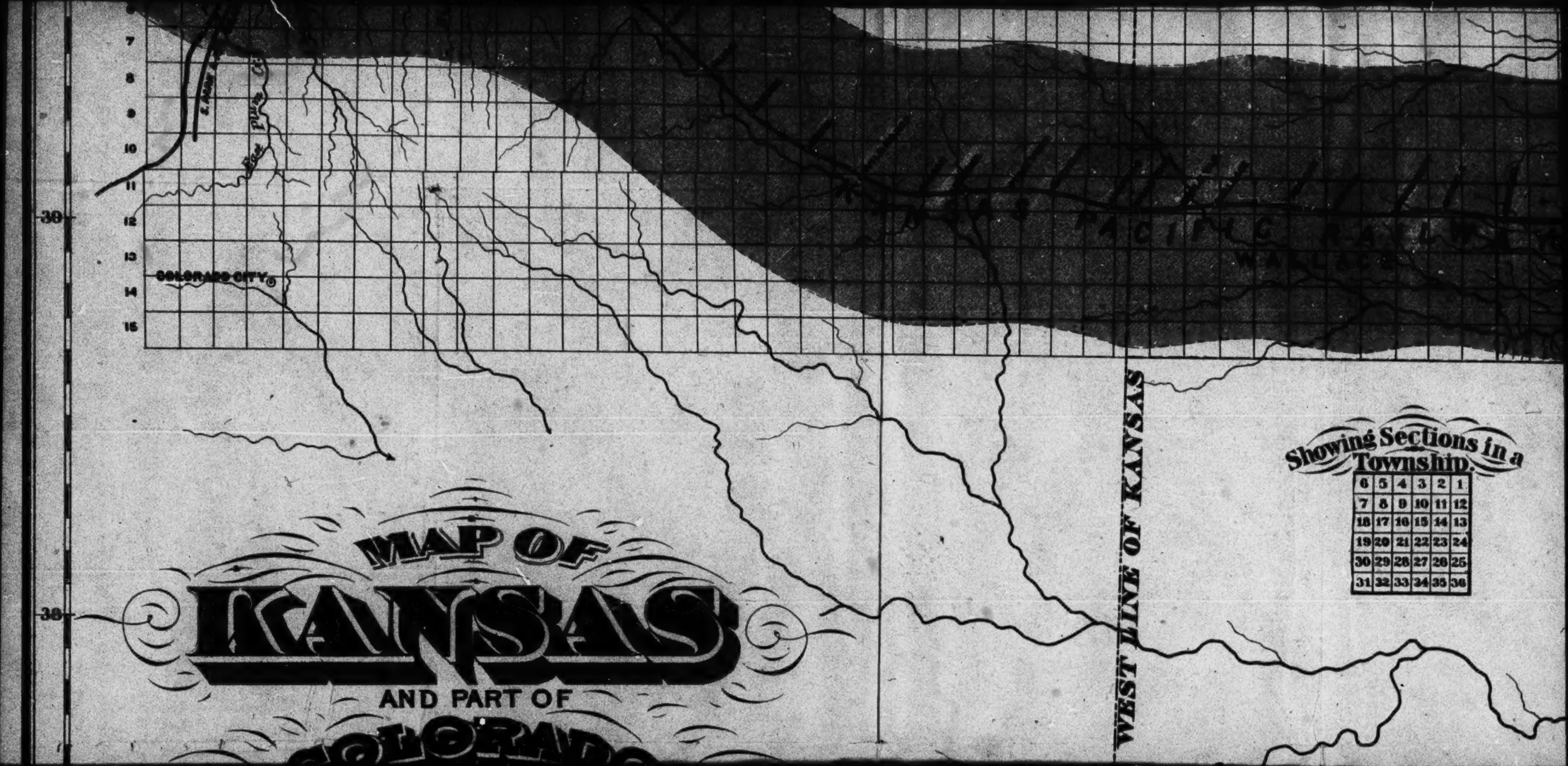
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MAP OF
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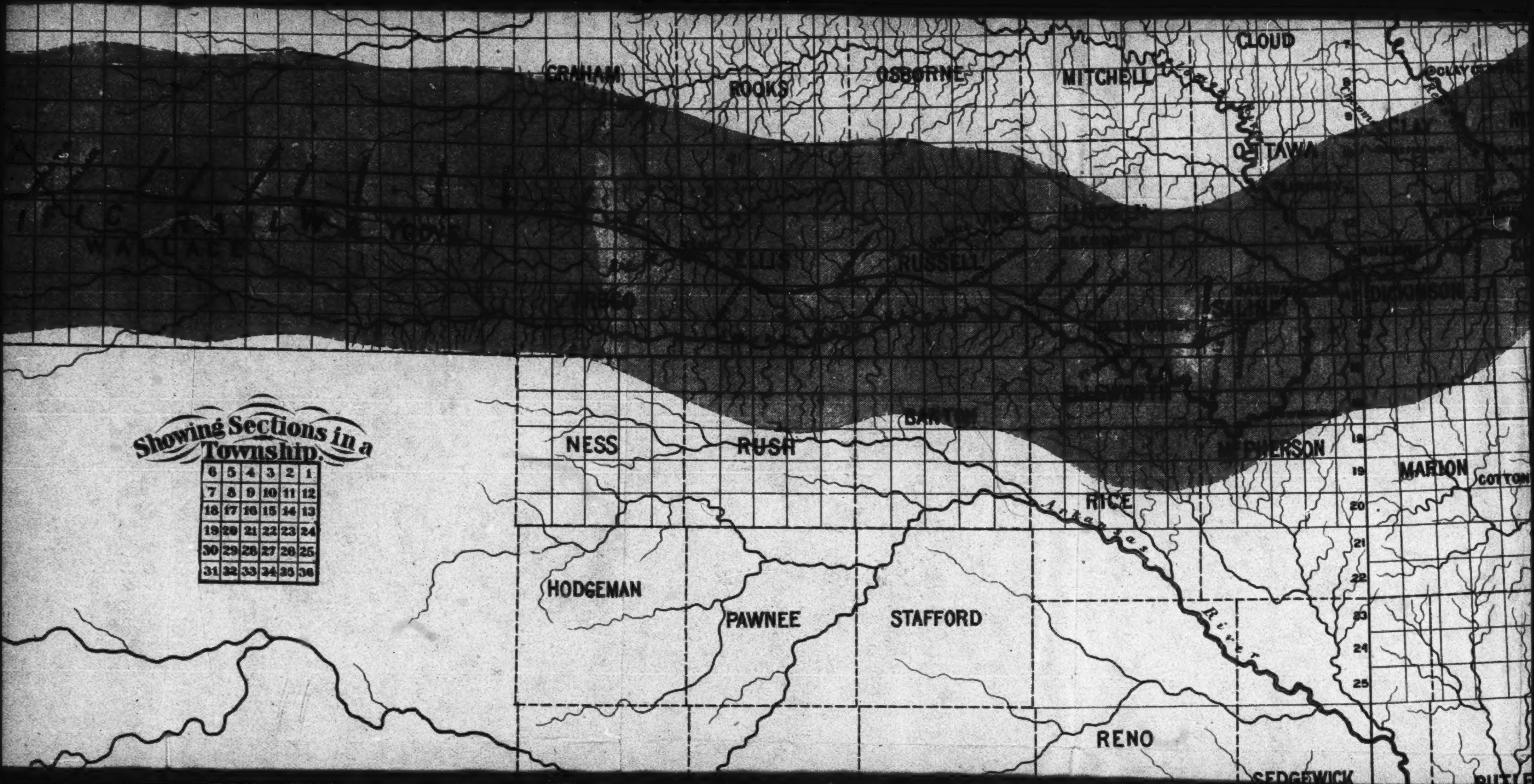
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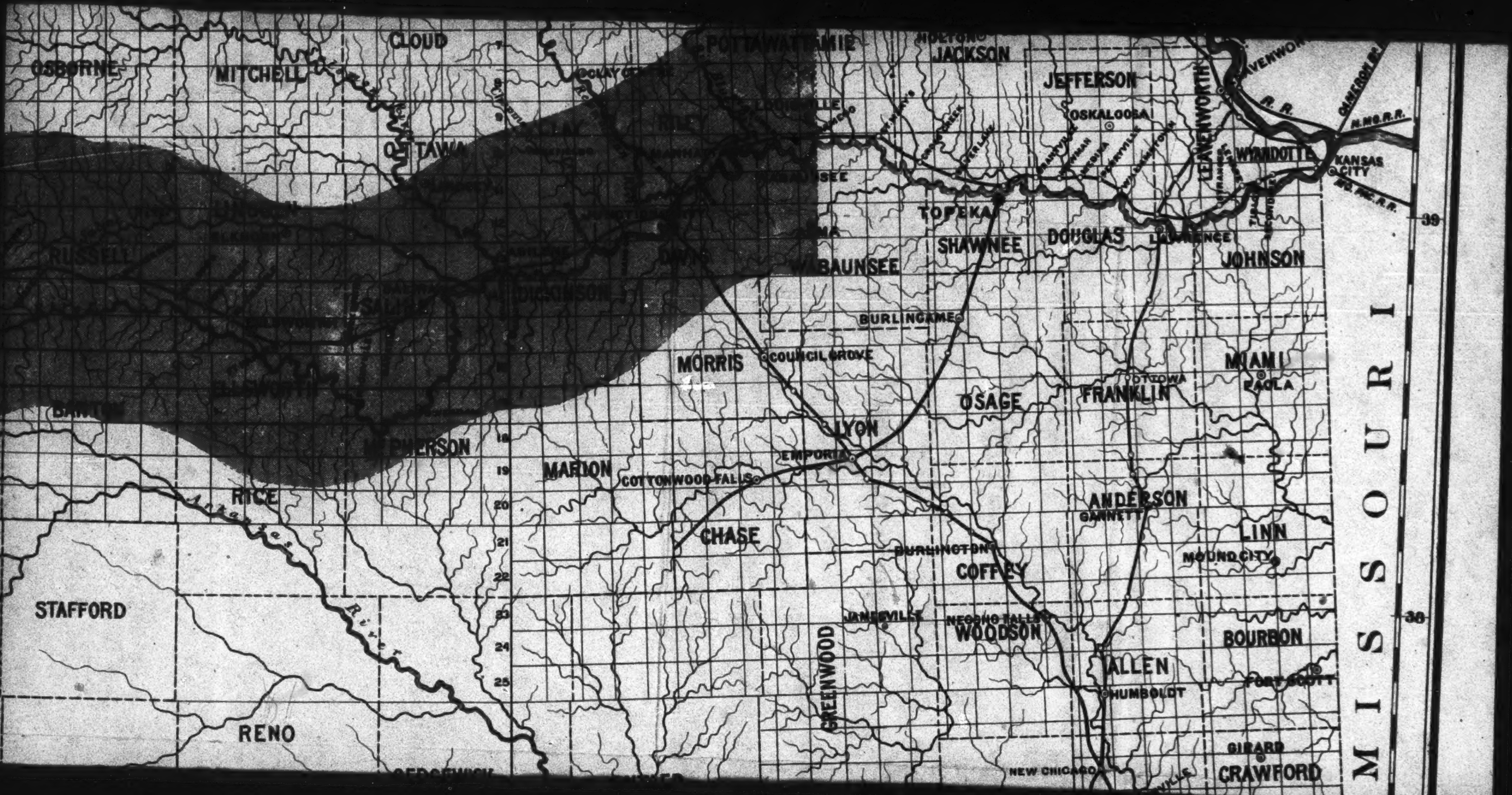
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OSKALOOSA
WYANDOTTE
KANSAS CITY
WABAUNSEE
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RUSSELL
SHAWNEE
DOUGLAS
LAWRENCE
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RICE
ANDERSON
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CHASE
LINN
BURLINGTON
COFFEY
MOUND CITY
STAFFORD
JANESVILLE
NEOSHO FALLS
WOODSON
BOURBON
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ALLEN
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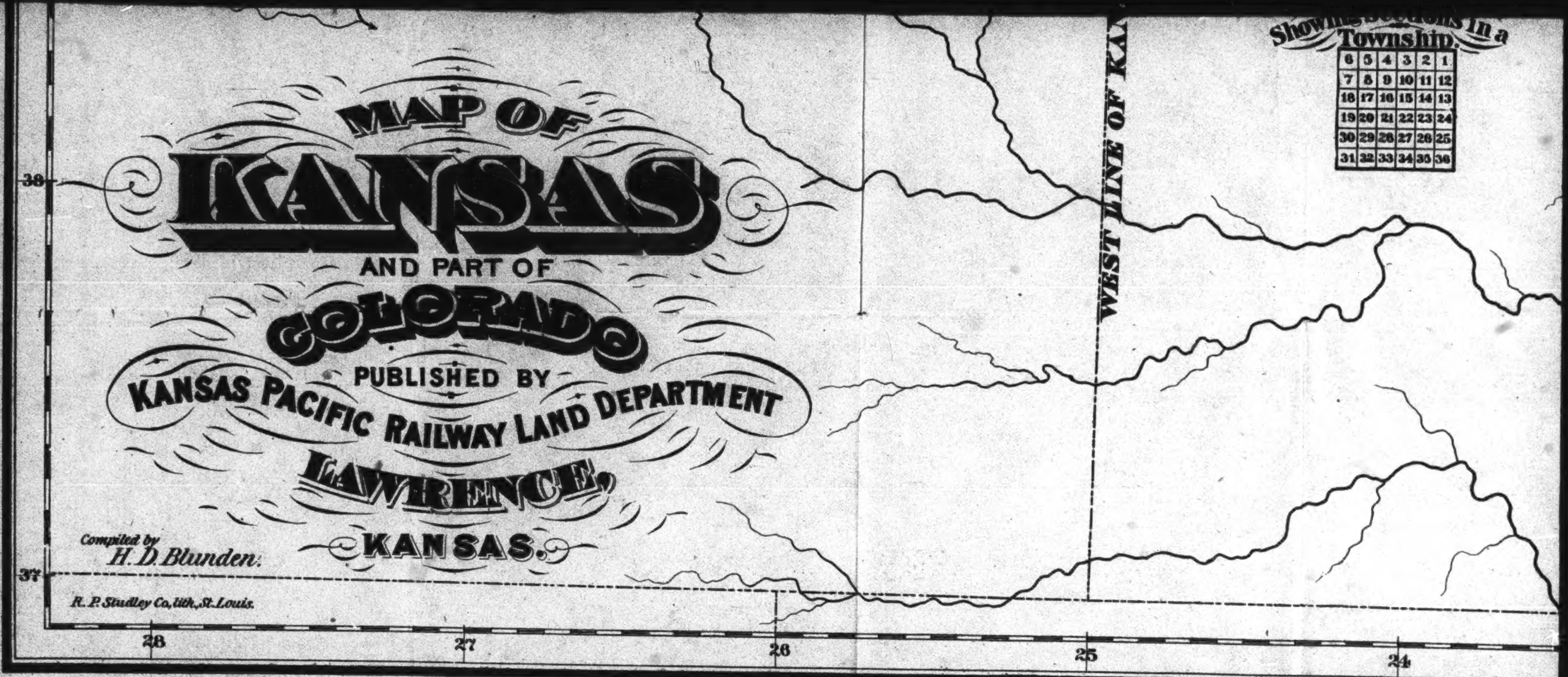
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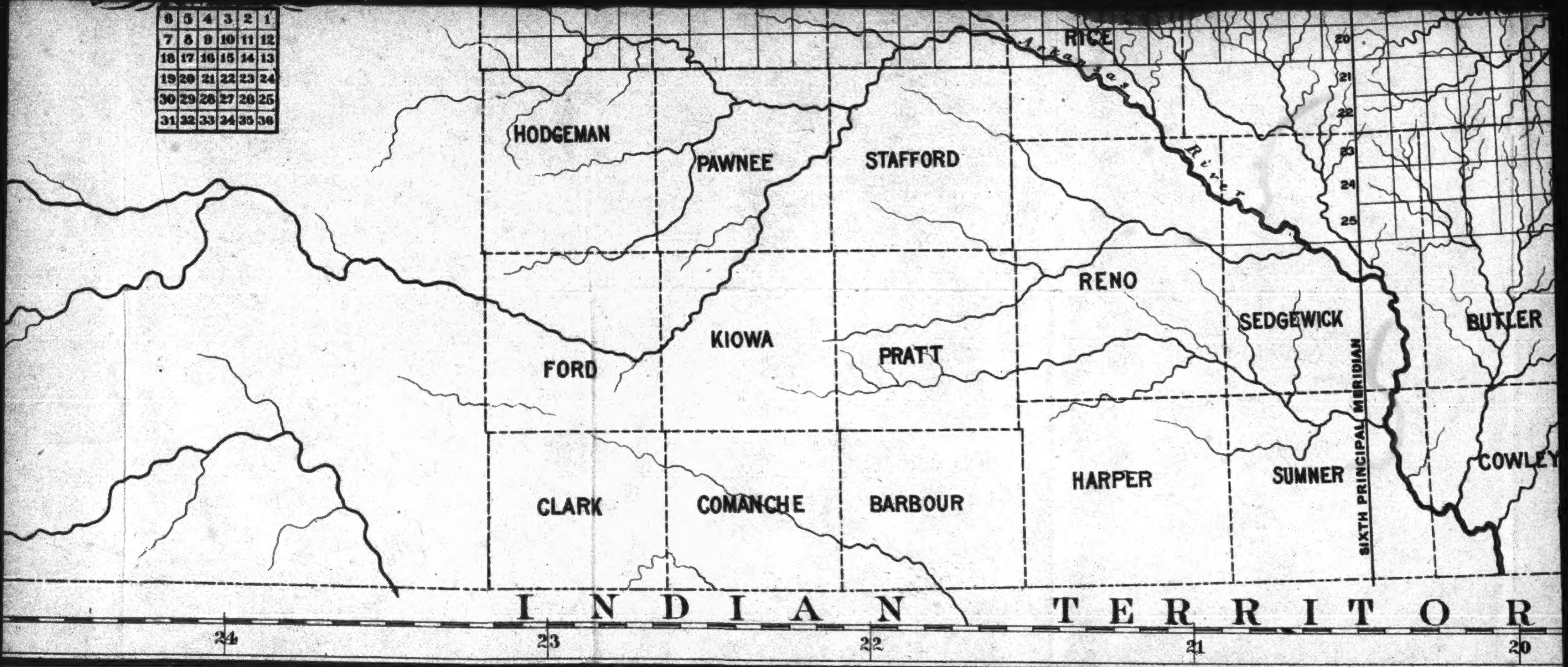
MAP OF KANSAS AND PART OF COLORADO

PUBLISHED BY
KANSAS PACIFIC RAILWAY LAND DEPARTMENT
LAWRENCE,
KANSAS.

Compiled by
H. D. Blunden.

R. P. Studley Co, lith, St. Louis.

The lands for sale by the Kansas Pacific Railway Company are situated within a belt of 40 miles in width, as shown by the shaded lines on
For agricultural and grazing purposes, healthfulness of climate and easy access to good markets these lands are unsurpassed in America.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HODGEMAN
PAWNEE
STAFFORD
RENO
SEDGEWICK
BUTLER
FORD
KIOWA
PRATT
SIXTH PRINCIPAL MERIDIAN
CLARK
COMANCHE
BARBOUR
HARPER
SUMNER
COWLEY
INDIAN TERRITOR
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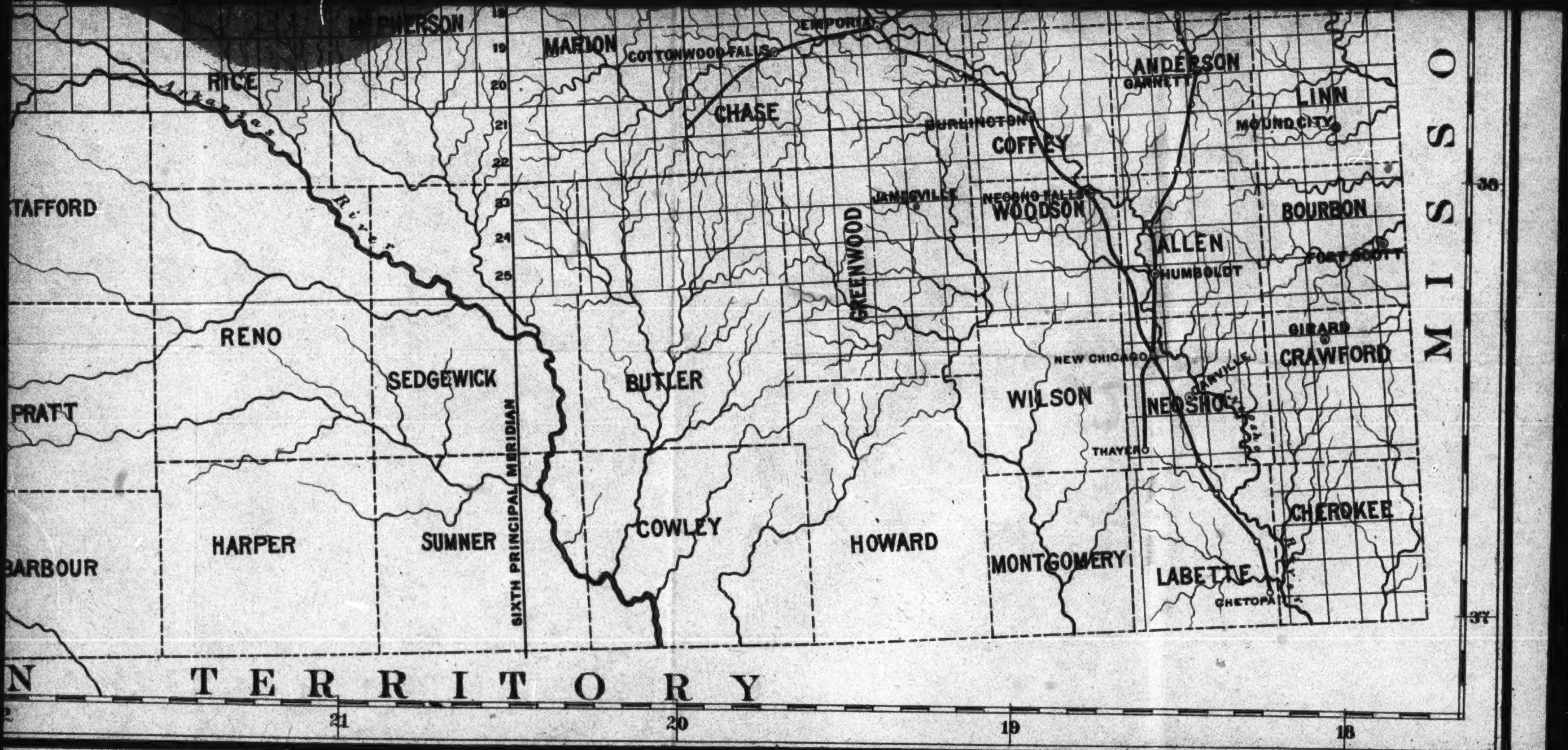
, as shown by the shaded lines on this Map. They are offered for sale at prices generally from $2 to $6 per acre, on terms of five years credit, and
are unsurpassed in America.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MARION
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STAFFORD
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NEW CHICAGO
SEDGEWICK
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SIXTH PRINCIPAL MERIDIAN
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generally from $2 to $6 per acre, on terms of five years credit, and in tracts from 40 acres upwards. **HARRIS, ABRAMS & CO.,**

General Agents,

LAWRENCE, KAS

WESTON'S GUIDE

TO THE

KANSAS PACIFIC RAILWAY

Containing a

Full and Reliable Description of the Cities and Towns, Lands, Minerals, Climate,
Hunting Grounds, Etc., along the Line of this Great National Highway, from
Kansas City, Mo., and Leavenworth, Kansas, to Denver, Colorado.

Treats Fully on Every Subject Concerning which the Visitor to this Country Could
Possibly Desire Information, and Contains a

MAP OF THE RAILWAY AND ITS CONNECTING LINES.

Also a Map of the Lands Belonging to the Company, Making the Work Particularly
Desirable to Tourists and Intending Emigrants.

W. WESTON, Editor.

Box 921, Kansas City, Mo.

KANSAS CITY, MO.:
BULLETIN STEAM PRINTING AND ENGRAVING HOUSE.

1872.

PREFACE.

IN presenting this work to the public, I have endeavored to give an accurate description of the Kansas Pacific Railway, its towns and cities, and various attractions, *as they are*, and as the visitor will find them, studiously avoiding that "high-coloring" which so often occurs *ad nauseam* in works of this description. Kansas is indisputably a beautiful and prosperous State, and her climate is healthful and delightful, but she is not the "Italy of America," nor "Arcadia," or any such nonsense. The best proof of the great wealth of her resources is the unbroken wave of immigration that surges year after year into her midst, and the absence of a return wave or a murmur of dissatisfaction from the thousands who have been absorbed in her sea of agricultural wealth. Volumes could be written on this subject, but "facts are facts," and I leave the intelligent reader of my book to draw his own inferences. He will there see the dates of the birth of our towns and cities, the story of their growth and their present condition, the success of pioneer agriculturists, and the immense and rapid rise in property values, and looking at the vast empire which has been created by this Railway, and the great domain yet uninhabited, decide whether there are not now as good chances for the settler along this great Line as there were at or before its inception.

W. WESTON.

THE KANSAS PACIFIC RAILWAY.

Foremost in the ranks of the great works of the day, stands the Kansas Pacific Railway; a bold project and daring in its conception, it is well worthy of its projectors, whose enterprise has broken up and melted away subtile, but hitherto ineffaceable barriers, leveled hills, bridged rivers, almost conquered time and space, and unlocked the, till then, sealed and comparatively unknown "Great West." The iron horse has swept from the Missouri River to the Rocky Mountains, and on every side has prosperity and abundance marked the rapid stride of this Railway; millions of acres of the most beautiful portion of the public domain have been rescued from waste and oblivion, causing the so-called "American Sahara" to dissolve from view, and give way to broad and fertile prairies, abounding with golden grain and yielding the choicest fruits.

This miracle of art, labor and capital, is indeed a monument to the energy and enterprise of its managers, and the nation should congratulate itself upon the completion of this magnificent avenue of commerce, which is rapidly settling up an almost boundless domain, and developing the mineral, agricultural and commercial resources of the extreme Western States and Territories.

As a measure of military retrenchment and economy, and taking into consideration the increase of taxable wealth and national power to be derived from the settlement of over nine millions of acres of pastoral, agricultural and mineral lands, and the value conferred upon Government lands hitherto lying idle and unproductive, the Kansas Pacific Railway has done much for the Government, and certainly has more than earned the help extended to it, to aid in its construction and equipment; and when we call to mind the difficulty which exists of obtaining capital for enterprises in the far West, the history of numerous railroads in that quarter which have passed out of the hands of original owners, thus sacrificing their entire investments, and the immense cost of building a road through a country for a great part practically uninhabited; when we remember all this, the immensity of the undertaking is easily realized.

By acts of Congress of July 1st, 1862, and July 2nd, 1864, the construction of the Union Pacific Railway, (Eastern Division,) formerly the Leavenworth, Pawnee and Western Railroad Company, and now known as the Kansas Pacific Railway, was authorized, the road to be built from the Missouri River, at the mouth of the Kansas River, to Fort Riley, at the mouth of the Republican Fork, and up that Fork to a point in its valley abreast of Fort Kearney, thence to make a junction with the Union Pacific Railroad in the valley of the Platte at the 100th meridian. But by an amendment to the original act, approved July 3d, 1866, the Company was authorized to change the line of its road westwardly from Fort Riley, building it up the Smoky Hill Fork of the Kansas River to Denver, in Colorado, making a junction with the Union Pacific at Cheyenne, 106 miles north of the main line. This change not only shortened the route very considerably, but instead of leading through the desolate and sterile Platte Plains, it now traverses a country of good soil and abundance of water, eminently adapted for the husbandman and stock raiser, and through a section abounding in coal and pine timber.

To aid in the construction of this road, the Government made a direct grant to the Company of $16,000 in bonds and 12,800 acres of land per mile, the lands being the alternate odd numbered sections of twenty miles on each side of the road. But the authority to change the general line of the road was given on condition that the Company should only receive the same amount of bonds that they would have been entitled to, had they connected with the Union Pacific at the 100th meridian, as originally required, which distance was found to be 393 15-16 miles, measured westwardly from the State line of Missouri and Kansas. The land grant, however, extends the whole length of the road from Kansas City to its junction with the Union Pacific at Cheyenne, but by authority of Congress, the lands belonging to the line from Denver to Cheyenne (106 miles,) were afterwards transferred to the Denver Pacific Railroad and Telegraph Company. The above great work was commenced in Wyandotte, Kansas, in September, 1863, and completed to Denver in August, 1870. The general course of the Railway is on the thirty-ninth parallel, and through the "Dacota Region" of Professor Cooper.

On the 19th of March, 1872, the Kansas Pacific Railway Company completed the purchase of a controlling interest in the Denver Pacific Railway, and appointed its officers, officers of that road, with Mr. C. W. Fisher as Assistant Superintendent.

DIRECTORS—ELECTED MAY 3, 1872.

ROBERT E. CARR	St. Louis, Mo.
ADOLPHUS MEIER	St. Louis, Mo.
CARLOS S. GREELEY	St. Louis, Mo.
WM. M. McPHERSON	St. Louis, Mo.
JOHN D. PERRY	St. Louis, Mo.
S. M. EDGELL	St. Louis, Mo.
B. W. LEWIS, Jr.	St. Louis, Mo.
THOMAS A. SCOTT	Philadelphia, Pa.
JOHN McMANUS	Reading, Pa.
MATTHEW BAIRD	Philadelphia, Pa.
WILLIAM THAW	Pittsburgh, Pa.

OFFICERS.

ROBERT E. CARR	President.
ADOLPHUS MEIER	Vice-President.
CARLOS S. GREELEY	Treasurer.
S. T. SMITH	Auditor.
CHAS. B. LAMBORN	Secretary.
EDMUND S. BOWEN	General Superintendent.
GEORGE NOBLE	Assistant General Superintendent.
JOHN P. DEVEREUX	Land Commissioner.
JOHN. P. USHER	Solicitor.
EDGAR W. DENNIS	Assistant Solicitor.
JOHN L. WOODS	Supply Agent.
T. F. OAKES	General Freight Agent.
BEVERLEY R. KEIM	General Ticket Agent.
General Office	KANSAS CITY, Mo.

DIVISION SUPERINTENDENTS.

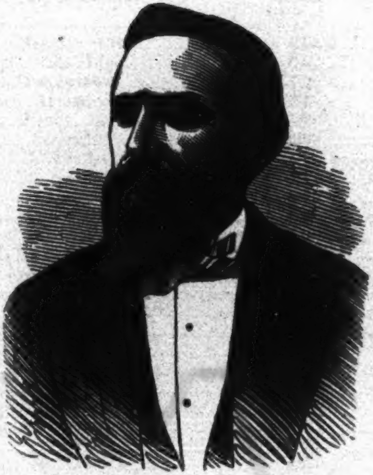
GEO. NOBLE	Kaw Valley Division.
O. H. DORRANCE	Smoky Hill Division.
C. W. FISHER	Denver Division.
L. H. WAUGH	Superintendent of Machinery.

The general offices of the Company are located at Kansas City, Missouri. The Land Department and Engineer's Department at Lawrence, Kansas, and the Treasurer's office at St. Louis, Missouri.

The General Passenger and Ticket Agent has local offices as follows:

P. T. DICKINSON	317 Broadway, New York.
G. W. METZGAR	469 West Madison street, Chicago.
N. C. NETTLETON	Fifth and Elm streets, St. Louis, Missouri.
C. N. CLARK	46 West Third Street, Cincinnati, Ohio.
J. A. MYRICK	134 Bank street, Cleveland, Ohio.
D. H. ELLIOTT	Chattanooga, Tennessee.

These agents are instructed to give full particulars to the public with regard to the line of Railway, and to supply maps and circulars on application.



ROBERT E. CARR,

President K. P. R. W.

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STATIONS ON THE KANSAS PACIFIC RAILWAY.

DISTANCES AND ELEVATION ABOVE TIDE WATER.

Distances	STATIONS.	Elevations above tide.	Railway tanks and depths at which water is found.
	Kansas City	648	
	State Line	648	
	Leavenworth	670	
1	Armstrong	657	30 feet.
8	Muncy Siding	669	
9	Secondine	693	
13	Edwardsville	685	Taken from creek.
17	Tiblow	695	
22	Lenape	683	
27	Stranger	691	Taken from creek.
31	Fall Leaf	711	
36	L. & L. Junction	715	
38	Lawrence	730	25 feet.
45	Buck Creek	748	
48	Williamsville	753	
51	Perryville	754	Taken from creek.
52	Medina	755	
55	Newman	763	
60	Grantville	779	
67	Topeka	788	25 feet.
77	Silver Lake	817	
83	Rossville	835	28 feet.
90	St. Mary's	857	
97	Belvue	870	
104	Wamego	902	29 feet.
110	St. George	902	
118	Manhattan	926	25 feet.
129	Ogden	962	
135	Fort Riley	974	Water from river.
138	Junction City	984	
150	Chapman's Creek	1,016	25 feet.
157	Detroit	1,037	
163	Abilene	1,057	
172	Solomon	1,077	
185	Salina Breakfast	1,127	30 feet.
194	Bavaria	1,173	

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Distances	STATIONS.	Elevations above tides.	Railway tanks and depths at which water is found.
200	Brookville	1,250	18 feet.
205	Rock Spring	1,343	Taken from creek.
210	Elm Creek	1,470	28 feet.
216	Summit Siding	1,556	
218	Fort Harker	1,584	
223	Ellsworth	1,440	Spring in bank.
230	Black Wolf	1,467	
239	Wilson	1,586	36 feet.
253	Bunker Hill	1,766	
262	Fossil	1,734	49 feet.
274	Walker	1,846	
289	Hays	1,893	From Big creek.
302	Ellis	2,019	22 feet.
312	Ogallah	2,269	
322	Park's Fort	2,347	65 feet.
336	Coyote	2,492	78 feet.
352	Buffalo	2,678	115 feet.
364	Grinnell	2,806	125 feet.
376	Carlyle	2,948	97 feet.
386	Monument	3,083	83 feet.
397	Gopher	3,220	
405	Sheridan	3,014	Taken from creek.
420	Wallace Supper	3,203	
429	Eagle Tail	3,336	10 feet.
437	Monotony	3,676	140 feet.
452	Arrapaho	3,908	
462	Cheyenne Wells	4,179	
472	First View	4,479	
487	Kit Carson	4,191	30 feet.
499	Wild Horse	4,340	20 feet.
511	Aroya	4,550	
523	Mirage	4,744	16 feet.
534	Hugo	4,952	15 feet.
547	Lake	5,203	20 feet.
555	River Bend	5,395	20 feet.
562	Cedar Point	5,614	
566	Godfrey	5,505	
572	Agate	5,360	65 feet.
583	Deer Trail	5,087	12 feet.
595	Bijou	5,705	20 feet.
608	Kiowa	5,378	100 feet.
617	Box Elder	5,430	80 feet.
629	Schuyler	5,238	33 feet.

Distances	STATIONS.	Elevations above tide.	Railway tanks and depths at which water is found.
636	D. P. Junction	5,095	40 feet.
639	Denver	5,105	
651	Hughes	5,070	
677	Johnson	4,960	
686	Evans	4,745	
691	Greeley	4,740	
706	Pierce	5,120	
725	Carr	5,790	
735	Summit Siding	6,415	
745	Cheyenne	6,041	

KANSAS CITY.

In the olden days cities attained celebrity by reason of their magnificence, by the beauty and grandeur of their works of art, or by the learning of their wise men, and because of the natural homage which men are prone to pay to beauty and to genius, they waxed powerful. In these golden days, however, quite different elements go to make up the glory of a city. Men have grown, perhaps not more venial, but certainly more practical in their ideas, and that city whose commerce is the greater, wields the more powerful influence over the destinies of nations. Everything, in fact, in this practical age, is weighed in the balance of wealth and power.

Probably there never was an inland city in any land so favorably situated for the development of transcendent commercial power as is the City of Kansas. Its commanding position was appreciated by the prescient Benton, when he pointed to the present location of the city as the future seat of empire for the West. Then all around was wilderness, and but few there were who thought that Benton's augury would ever be realized. The present site of the city was a mass of high bluffs, interspersed with deep ravines, the whole covered with dense primeval forests. In a few words can be explained why it should and must be pre-eminent among the cities of the plains. The city is built on high bluffs in the Great Bend of the Missouri River, just below the mouth of the Kaw, or Kansas, on the south bank, at the point which is at the same time the farthest west on navigable waters, and still is in a geographical location so central as to make tributary to it, the produce of the fertile

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southlands and the pastoral wealth of the Plains, while it garners the sheaves of the Northwest; and all their gigantic and ever-increasing traffic becomes an element of its growth and joins in building up its power. It is the nearest and most accessible distributing centre of the Southwest, whose teeming millions of cattle find their market through its railway system. Its climate is healthy and invigorating.

In the earlier period of its existence as a town it was called Westport Landing, being in effect at that time, nothing more than a place at which steamboats unloaded their goods intended for Westport, some three miles south. A portion of this land, now embraced in the city limits, was entered about 1839 by Gabriel Prudhomme, and the greater part of the remainder between that period and 1847. Westport was first laid out in 1833, and at one time enjoyed a considerable trade in outfitting trains for New Mexico. In 1839 a partial survey of what is now known as Old Town, Kansas City, was made, but owing to some misunderstanding between the proprietors, the town made but slow progress until in 1846, when it was laid out on a more extended scale, and the first sale of lots occurred in April of that year. It was in 1839 that the name Westport Landing disappeared and Kansas took its place; it was so named because it was at the mouth of the Kansas River. Some suggested Kawsmouth, by which name the location had been long designated by the hunters and trappers who met there as a kind of rendezvous, but Kansas was finally agreed upon, and the embryotic city was so christened.

After the sale of lots above noted, the growth of the town was quite rapid for some time, so that at the end of eighteen months it had about 700 inhabitants. During the early prevalence of the California gold fever, the City of Kansas derived little benefit from emigration, and soon, in 1851, came the cholera, that dreaded scourge, and almost depopulated the town, those that did not fall victims to its ravages fleeing the vicinity. At the end of this visitation, the whole population numbered scarcely 300. By-and-by, however, the deserting villagers returned to their homes, emigration again set in, and the town began anew to form the basis of its future. Nothing eventful occurred until the crash of 1857, but this was comparatively unfelt in Kansas City, the commerce of this region being at that time semi-independent of that of cities in the East, having a sort of basis of its own, which was unaffected by the fluctuations of the outside world. The Border Ruffian war also raged about this period, but it does not appear to have exerted more than a passing effect on the fortunes of the young city, which continued to grow and increase until the breaking out of the Rebellion.

At this period Kansas City was one of the most flourishing towns on the frontier. The advantages of its location had become patent to the world, and it was fast realizing Benton's prediction. Emigration to Kansas was pouring through its streets, adding largely to its business by the emigrants buying their stores and outfits here, and its own population had swelled up until it amounted to the respectable figure of 7,000. But the war brought temporary ruin to the young city. Its proximity to the ground in conflict made it rather uncomfortable as a dwelling place. The city was never actually in the hands of the rebel forces, but it was for a long time threatened; and in order to guard against capture, earthworks and a fort were thrown up. The fort stood on the site of the present Broadway Hotel, corner Broadway and Tenth. Many citizens were induced to leave through fear, and thus we find that at the close of the war there was left a population of only about 2,500. But this was not all. With the loss of its inhabitants, the city lost seemingly the prestige which its previous years of prosperity had given it, in the trade of the frontier. All, all had gone to seek other marts. The progress of the Pacific Railroad, which had been pushing rapidly forward at the beginning of the war and was expected soon to give rail communication with St. Louis, was stopped completely by the same cause which had destroyed the commerce of the city.

Everything, indeed, had a black look for the shattered city. But it had a brave people, and its superior advantages for controlling the trade of the whole vast extent of country stretching west from its bluffs to the mountains, soon began to attract anew the attention of capital and labor, and again it commenced the course that was to lead on to success over every obstacle. It was soon determined that the railroad projects which had been in abeyance since the commencement of the war, should be pushed forward to their earliest completion. Bearing in mind the advantages of their situation, knowing their control of the river trade, the people of the city undertook the project of a vast system of railroads, centering at and diverging from the mouth of the Kaw in all directions, and by persistently agitating the subject they have secured their present magnificent railroad system, which is every year growing and multiplying, extending the iron bands of commerce into hitherto unrifled regions and bearing their fruits to the coffers of the "City on the Bluffs." A distinguished railroad official said, a short time since, "Railroads can't help it; they're bound to come to Kansas City whether they will or not." Lines that were originally fostered by rivals as "cut offs" are now seeking outlet here. And thus Kansas City entered upon the epoch of railroads.

The pioneer was the Pacific Railroad of Missouri, whose track was completed to the city on the 1st day of October, 1865. Within the past year the Missouri Pacific, formerly terminating at Atchison, has been placed in direct communication with Nebraska by the building of the Atchison & Nebraska Railroad. Following the Missouri Pacific, in rapid succession came the Kansas Pacific, Hannibal & St. Joseph, North Missouri, Missouri River, Fort Scott & Gulf, Kansas City, St. Joseph & Council Bluffs, and the Leavenworth, Lawrence & Galveston Railroads. Later we have the Chicago & Alton running trains here via the North Missouri Railroad. The Kansas City, Memphis & Mobile Railroad, to give direct connection with Memphis and the South, is under construction, and a branch line is agitated and will probably be built during the coming summer, from Emporia to Ottawa, which will convey to this city all the cattle trade of the Atchison, Topeka & Santa Fe road. A direct communication between Kansas City and Moberly, the terminus of the Toledo, Wabash & Western Railroad, has every prospect of being established. Other lines are also agitated—the Kansas City, Independence & Lexington, and the Kansas City, Wyandotte & Northern, both narrow gauge.

The inconvenience of the method of ferriage across the river was soon felt and steps were taken to abridge the difficulty. It was known that to build a bridge across the "Big Muddy" was a vast undertaking, and hitherto no one had thought it advisable to make the attempt. But the people were of the right sort. They could see the awakening effect the success of such a project would have upon the trade of the city; and they went to work with might and main to have it done. Money was raised and work on the bridge was begun. Its progress was anxiously watched and its event impatiently waited for, and in due season the bridge was finished, thereby solving the problem and proving that the Missouri could be bridged. To Kansas City belongs the honor of having constructed the first bridge across it. On the 4th of July, 1869, its completion was celebrated, and it was formally opened to the public.

This did away with the system of ferriage and transferred the freightage of the railroads that formerly terminated at Harlem, from the Levee to the Bottom, or West Kansas, as it is known—a large lot of bottom land lying along the right bank of the Missouri, and between the Kansas River and the bluffs on which the major portion of the city stands.

In these bottoms are situated the various depots of the roads which centre in the city, except the city depot of the Missouri Pacific, which is on the Levee. A large Union passenger depot is in contemplated erection in the Bottom, to be used conjointly by all the railroads. Since the railroad business has been transferred to West Kansas, that locality has assumed the proportions of a thriving city itself, though it is of course under the same municipal government as that portion situated on the bluffs. In the Bottom, too, are the large beef and pork packing establishments which have, in the first named item at least, placed Kansas City at the head of the world.

Since the completion of the first railroad the history of the city has been one continued succession of marvels, in the astonishing rapidity with which population has poured into it, and the swift and gigantic strides it has taken toward the assumption of metropolitan proportions. At that time the population was rather under 6,000; the census taken in the fall of 1870 showed 32,286 inhabitants, and to-day it is estimated that there are at least 40,000. No other city has ever been known to grow so rapidly and maintain its rate of increase so steadily. There are many, would-be rivals generally, who say that the growth of the place has been that of a mushroom, and that after the first brief splendors of our life are spent, our decadence will be as sudden as our rise, and that our history will be an apt illustration of "up like a rocket, down like a stick." These we can only refer to the fable of the dog in the manger, leaving them to make the very apparent deduction.

There are others, however, who have witnessed the extraordinary progress of Kansas City with wonder and admiration, who genuinely doubt that a prosperity so striking in its results can be permanent and lasting. To such we would point out the resources of the country behind us, yet in the very infancy of its development, and ask them to look at the wonderful commerce that its products create even now. If they yield such results at this early stage of their productiveness, what may we not expect to derive from them in future years, when the whole region shall be made to bring forth its fruit? At present not all the lands within one hundred and fifty miles west are producing; the Indian Territory, containing a vast domain of the best lands in the world, is under the ban—it cannot be cultivated. We hold tributary to our markets the trade of the whole extent of country from the Missouri River to the Rocky Mountains, a region six hundred miles long by as many broad. All these acres find their market here and the entrepot for their supplies, because it is at the gateway to them. The geographical structure of the country gravitates them this way.

Besides the agricultural resources upon which Kansas City will rely for her support, in which, of course, are included the pastoral productions of the Great Plains, the mineral wealth that now contributes to her power is enormous, and it is to a great extent scarcely begun to be opened up. Coal is found in inexhaustible quantities of good quality, all around and within easy reach. In the eastern tier of Kansas counties and the western tier of Missouri, the coal beds are of almost boundless extent, and it is found in other portions of the two States contiguous. Missouri is well known as one of the richest of the States in its iron deposits, and many other minerals of commercial value are found within the scope of country which falls directly tributary to Kansas City. The lead mines of Southwestern Missouri are daily becoming more productive, and the greater part of this must necessarily come this way. All these things must in the end build it up as a manufacturing centre. For these crude materials must be fashioned into shape in order to be made useful. The people living in the West must be supplied with implements made from these or other similar materials. All the accessories are here now, but the capital to engage in manufacturing enterprises—there is cheap fuel, the crude ores, plenty of water, and the manufactured articles can be turned out here cheaper than they can be put here after two transportation charges are made. Therefore the capital is bound to come, and the only need is time.

Again, there are the improvements that have been made in the city. Take, for instance, the business houses that have been put up since the city took its memorable start after the war. The solid and enduring style of their architecture is the most convincing argument that they have come to stay.

Of the early trade of the city little need be said. It was similar to that of all new towns on the frontier, embracing the supplying of the Indians and hunters with what "knick-knacks" they might want, and receiving in return therefor furs, peltries, etc. It has grown with the city's growth and strengthened with its strength, and is now of proportions that should delight every well-wisher of the young giant. A brief resume of some of the most important branches of the city's trade for 1871 may not inappropriately close this sketch of Kansas City. It is compiled from the carefully prepared statistics published by the Kansas City Daily *Bulletin*, in its annual review of the business of the city for 1871:

The wealth of the city is estimated to be $34,000,000; during the year there were transfers of real estate to the amount of $2,080,434, and buildings were put up valued at nearly $3,000,000. Of banks there are ten, with capitals ranging from $100,000 to $350,000. Of agricultural implements the sales aggregated $1,305,000; the lumber trade amounted to $865,000; hardware and stoves, $680,000; boots and shoes, $400,000; groceries, $6,578,000; liquors and cigars, $1,050,000; salt, $138,628; drugs, $1,000,000; leather and saddlery hardware, $500,000; clothing, $1,700,000; in dry goods the stocks carried aggregated $2,150,000.

In live stock Kansas City is one of the leading marts in the country. During the last seven months of 1871, there were received at the Kansas Stock Yards 120,827 cattle; 40,333 hogs; 4,527 sheep. In beef packing the city leads the world, 45,000 head, more than half the packing of the whole country, having been cut here in 1871. Of hogs the number packed was 68,000. Preparations are now making to treble the number the coming season. The grain and flouring interests rank among the most important features of our commerce. The wheat bought by three mills was 465,865 bushels; number of barrels of flour manufactured by them, 105,536. The amount of other grains bought is incalculable, and besides what is shown by the figures published, an immense quantity of wheat found a market here through other sources.

The few figures we have given are suggestive of the fact that an immense business has been done here, and from the present indications, the passing year will show its due increase. The official census taken two years ago gave the city a population of 32,286. To-day from the most reliable data obtainable, it is estimated that over 40,000 persons dwell within our walls. We have struggled up from the "deserted village" the close of the war left our city, to the proud position of "Queen of the Valley," and the future is bright with the promise of prosperity.

Elsewhere will be found an engraving of Coates' Opera House and the Broadway Hotel, situated on Broadway, one of the finest streets in the city, and nearest of approach to the depot. Both these buildings are elegant and costly, and are a credit to the enterprise of the owner and builder, Col. Kersey Coates. The Opera House was commenced in the summer of 1869, and opened in the fall of '70. The last season has been a very prosperous one. It is capable of seating 2,000 people, is handsomely fitted, and surpassed by no building in the city of St. Louis. The Broadway Hotel was opened in the fall of '69. It has 150 spacious and elegantly furnished rooms, and is capable of accommodating 300 guests. The situation being high, it is exposed to the cooling southern breeze, and commands a very picturesque view of the Missouri river and the adjacent country, making it particularly desirable as a summer residence. The dining-room is airy and spacious, being 50 by 100 feet, and many of the rooms are fitted up in a costly manner, surpassed by no hotel in the West. The hotel is under the management of Mr. W. H. Savage, who, during the past year, has done much to increase its popularity and patronage.

STATE LINE.

Is THE first stopping place of the Kansas Pacific trains after leaving Kansas City, and is distant from the Union Depot a quarter of a mile. Here connection is made with the Missouri Pacific, of which railway Atchison and St. Louis are the termini. Here are located the freight houses of the K. P. R. W., and also the Union Stock Yards, which have a capacity of over 20,000 head of cattle, and were built with the object in view to hold cattle for a considerable time, if required. These stock yards are as complete in their appointments as the Union Stock Yards, of Chicago. This place at State Line has now become a general cattle market where buyers and sellers come together, and a drover, arriving at any station on the Kansas Pacific Railway with a herd, can ship at once and be sure to find a market when his animals arrive in Kansas City. The town is situated on a rising ground, considerably above the level of the Kansas and Missouri rivers, and near their junction; but being considerably below Kansas City, which is built on a high bluff, it is familiarly known as "The Bottom." It is called State Line because it is situated at the dividing line between the States of Kansas and Missouri. It has some good stores and hotels, and is the location of the mammoth packing houses which are described elsewhere.

WYANDOTTE.

THIS CITY is situated at the confluence of the Missouri and Kansas rivers, and contains, at the present time, about 4,500 inhabitants. The town site is one of the most beautiful in America. It rises gradually from the Missouri river, which washes its eastern base, and somewhat precipitately from the Kansas river, which flows along its southern border. The soil is as good as any known—so says Prof. Swallow, who has analysed the soils of all civilised nations.

The Wyandotte Indians, when about leaving Ohio, sent a delegation to select the most desirable spot they could find for their new homes. After looking over the entire country from the Missouri river to the Rocky Mountains, they selected the ground on which Wyandotte now stands, together with a considerable portion of what constitutes Wyandotte county, as being much the finest tract of country they could find. The Delawares being then in possession of this country, the Wyandottes purchased of them and removed from Ohio with their families, to their new homes here, not far from in 1842 or 1843.

The Wyandottes, many of them, being well educated, and skilled in the arts of industry, soon had numerous farms under improvement, and elegant brick and frame residences to live in. Many old but thrifty orchards of apple, peach, pear and plum trees, bear testimony to their foresight in providing for themselves and those who should come after them, the greatest physical luxury of life, an abundance of good fruit.

Wyandotte county is believed to be the best fruit county, the best timbered and the best soil, take the three qualities together, of any county west of the Mississippi river and east of the Rocky Mountains.

Wyandotte is about two miles above Kansas City, Mo. There is now a good toll bridge over the Kansas river at its mouth, and an elegant and costly iron bridge is being erected but a few rods above it, which is to be free, and will be ready for public travel about the first or middle of June of the present year, 1872.

The Missouri Pacific Railroad Company is making arrangements to build a railroad bridge over the mouth of the Kansas river, so that there need be no lack of cheap and rapid communication between Wyandotte and Kansas City.

Arrangements are in progress for having street cars running over the new iron bridge between Wyandotte and Kansas City as soon as the bridge is completed. It is believed that many people doing business in Kansas City will then seek residences on the beautiful slopes of Wyandotte.

There are now two weekly newspapers printed in Wyandotte; the GAZETTE, published by R. B. Taylor, and the HERALD, published by V. J. Lane & Co. The former is Republican, and has been published thirteen years. The latter is Democratic, and its first number was issued on the 4th of January, 1872.

There are six religious societies in the place that have houses of worship of their own, and maintain regular services. They are the Catholic, Father Kubes, pastor; Episcopal, Rev. J. G. Jones; German Methodist, Rev. J. Ferrel; Methodist Episcopal, Rev. S. P. Jacobs; M. E., South, Rev. Wm. Barnett; and the Congregational, Rev. James G. Dougherty. There are also several Church organizations that have not yet been able to erect houses of worship, but hold their meetings in some of the numerous and commodious public halls.

The Masons, Odd Fellows, Locomotive Engineers, Sons of Temperance, and Grand Army of the Republic, all have organizations, all, or nearly all, of which are in a prosperous condition.

The State Institution for the Blind is located in Wyandotte. The buildings, for the accommodation of the pupils and the family of the Superintendent, are situated on a handsome rise of ground about a mile west of the Missouri river. The Rev. J. D. Parker is the Superintendent, and in the opinion of the Trustees, as well as of the citizens of Wyandotte, he is peculiarly well fitted for the position. There are now as many pupils in the Institution as can be well accommodated with the present amount of room. An appropriation was made, however, at the late session of the Legislature for the purpose of erecting an additional building, so that as the population of the State increases, all may be accommodated.

The public schools of the city are under the supervision of Prof. O. C. Palmer, probably as competent an instructor as the State affords. He is sustained by a most excellent corps of teachers, and it is believed that no town in the West has better educational advantages, except such as have seminaries or colleges supported by State aid.

Wyandotte is the initial point of the Kansas Pacific Railway. Here the first locomotive was landed from a Missouri river craft; here the first bar of iron was laid down, and here are now, and have been since the commencement of the road, the extensive shops of the company.

The Constitution of the State, under which it was admitted into the Union, in 1861, was made in Wyandotte, the convention for that purpose sitting here in the summer of 1859.

There are at present in Wyandotte three banks, twenty grocery stores, three or four of them doing a large wholesale as well as retail trade. There are three dry goods stores, besides three or four merchant tailoring establishments, and three extensive millinery and thread-and-needle stores, which keep a large assortment of goods sometimes classed in the dry goods line. There are four large drug stores, two extensive hardware stores, four bakeries, three book and stationery stores, two news depots, three boot and shoe stores, two cigar manufactories, three lumber yards, five meat markets, three livery stables, two hotels, two furniture stores, three tin and stove stores, two jewelry establishments, four blacksmith shops, one plow manufactory, two large flouring mills, three paint shops, two wagon manufactories, one dentist, one photographer, eight doctors, and ten lawyers.

Wyandotte possesses now, and as the town improves with age, will possess in a still greater degree, very superior advantages as a place of residence. It also has great advantages as a manufacturing point, and as population increases and the State fills up, must make one of the best business points in the West.

ARMSTRONG.

1 Mile between Stations. **1 Mile from Kansas City.**

HERE ARE located the machine and car shops and round-house of the Kansas Pacific Railway. Two hundred and fifty men are employed here, under L. H. Waugh, Esq., Superintendent of Machinery.

EDWARDSVILLE.

11 Miles from Armstrong. **12 Miles from Kansas City.**

IS LOCATED in Wyandotte county, near the north bank of the Kansas river. There is a saw-mill here, two general stores, school-house, etc. The adjoining land is of a good quality, and worth from ten to twenty dollars an acre. Population about two hundred.

LENAPE.

8 Miles from Edwardsville. **22 Miles from Kansas City.**

IS A small station on the line of railway, and situated in Leavenworth county. Land in the immediate vicinity is bottom land of the Kansas river, but not subject to overflow as such land usually is. It is worth from ten to fifteen dollars per acre, and the crops of corn produced here are wonderfully fine. There are two general stores here. Population about one hundred.

STRANGER.

4 Miles from Lenape. **26 Miles from Kansas City.**

IS SITUATED at the confluence of Big Stranger river and the Kansas river, 27 miles from Kansas City. It was first located by the "Delaware Lumber Company in 1865, and since owned and re-surveyed by the "Kaw Valley Town Company." It is surrounded by an agricultural and stock growing country, consisting of upland and valley prairie, and timber of the following kinds: Red and Burr Oak, Walnut, Hackberry, Ash, Hickory, Cottonwood, and Sycamore. Soil good, and lime and sand-stone for building purposes plentiful.

Many excellent springs exist in the vicinity. A thriving lumber trade was carried on for several years by Mr. J. S. Duncan, who was the first settler and is still a resident. There is a good school-house here, very prettily situated, and is well attended during nine months of the year. Population about two hundred and fifty. The Methodists, Rev. Mr. Wood, pastor, and the Baptists, Rev. Mr. Hickock, have organizations here, and other denominations are represented, not yet organized, however. A Union Sabbath School is in successful operation, and was recently made happy by the present of a very handsome cabinet organ. The surrounding country is fast filling up with an intelligent and industrious class of farmers, whose shipping and trading point will be Stranger Station. Messrs. John Tudhope, Wm. Hayden, J. N. Jewett and James Irvin are the principal stock raisers and farmers. One dry goods and one grocery store, are the only places of business as yet, and a good general country store would do well there. Land can be had in the neighborhood at from $10 to $20 per acre, choice bottom land at the latter figure. Mr. O. Branham is the agent and telegraph operator for the Kansas Pacific Railway at that point. The Railway was completed to Stranger in 1864.

THE LEAVENWORTH BRANCH.

THIS line extends from Lawrence to Leavenworth, with trains running to connect with the passenger trains on the main line.

RENO.

THE FIRST station, contains about 150 inhabitants. The surrounding country is fine, gently rolling prairie, with extremely prolific soil. A fine stream, named Nine Mile Creek, flows within half a mile of the village, and with abundance of timber and water, it could not be surpassed by any district for stock raising facilities. There is one farmer in the vicinity worthy of note, who devotes his attention particularly to the raising of blooded stock, viz., H. J. Jewett, who owns a fine farm of 1,600 acres, a half mile from the village; Mr. John Farrell, owning 200 acres, and Mr. C. J. Buckingham, owning 640 acres, one-half mile from Reno, also have very fine farms. There are two churches—the United Brethren, Rev. Sam'l Kelsall, pastor, and Baptist, Rev. C. Moor, pastor, and they have also a general store, grocery store, blacksmith shop, hotel, and a fine new brick school-house, two stories high, just built. The railway was completed to that point in 1866.

TONGANOXIE.

Is a small village and station on the line of railway in Leavenworth county, and distant twenty miles from Leavenworth city. It has a flouring mill, and seven or eight stores, etc. Population, 300.

MOORE'S SUMMIT.

A SMALL village and station on the line. A fine vein of coal, three feet thick, has recently been opened here, and enough coal is now being taken out for the purpose of a test, by the Railway Company, as to whether it is eligible for locomotive purposes.

FAIRMOUNT.

Is PLEASANTLY situated on the divide between Stranger Creek and the Missouri River, ten miles by rail from Leavenworth, and seven by wagon-road. The town site originally comprised 350 acres, and was owned by the Kaw Valley Town Company, who subsequently sold 160 acres for farming purposes. The surrounding land is gently undulating prairie, with rich soil; a noticeable feature in this soil, and one in which it differs from most localities, is that no limestone or sand-rock outcrops are to be seen in the ravines that traverse this prairie. The Railway Company has a neat and commodious station building at this point, erected at a cost of about $3,000. Immediately opposite the station is a grain warehouse, having a capacity of 60,000 bushels, and built at a cost of $5,000. The village contains about 20 houses and 200 inhabitants, and has a general store, blacksmith shop, wheelwright, and a district school-house, built of brick; two stories high, and costing between $5,000 and $6,000. Land along the line of the Railway in this neighborhood is worth from $35 to $60 per acre, and is nearly all fenced; two-thirds of the farmers have hedges "turned out," and nearly all the farmers are cultivating the Osage Orange hedge successfully. In this neighborhood there are some of the finest farms in the State, that belonging to J. H. Steiner, Esq., of Leavenworth, being particularly worthy of mention. It is situated five miles from Fairmount, and contains some 600 acres of land, with fine running water and timbered "blue grass" pasture. The proprietor is extensively engaged in breeding "thorough-bred" running and "fashionable bred" trotting horses, and has a fine race course on the place, where he handles from thirty to fifty horses in the season. He has also a variety of blooded hogs and cattle. Hon. Alex. Caldwell, United States Senator, has a fine improved farm here, and Hon. J. P. Usher has also a farm of 1,900 acres under fence, 1,400 of which is under cultivation. Messrs. Hunniwell, Greever, Hiatt, and Morris are enterprising farmers and breeders of blooded stock at this point. This land is all part of the celebrated Delaware Reserve, and was purchased from the Indians by the Kansas Pacific Railway Company.

Since writing the above, Mr. Steiner has sold his farm, and it is now in the hands of Capt. Tough and J. M. Webster, Esq.

PENITENTIARY.

A STATION on the line, and the location of the State Penitentiary.

LEAVENWORTH.

IS A handsome city of some 20,000 inhabitants, and is prettily situated on the west bank of the Missouri River, about thirty miles south of St. Joseph, Mo., and two miles and a half below Fort Leavenworth. Speaking of her early history, the Kansas *Gazetteer* says:

"This city was first settled in June, 1854, by a company of persons from Weston, Mo., who organized an association of thirty-two individuals. The first town site contained 320 acres, lying south of the military reservation of Fort Leavenworth. It was surveyed and platted by Gen. Gist, and was divided into one hundred and fifty shares. The association expended a large sum that year in cutting the timber and brush on the town site, and clearing it for building.

"On the 15th of September, 1854, the first newspaper in Kansas was published, called *The Kansas Herald*. It was printed under "the old elm tree" on the levee, near the corner of Cherokee street. Some six weeks afterwards the printing office was removed into premises built for it.

"The first sale of town lots took place on the 9th of October, 1854, which realized $12,600. But little building was done that year; but next year the town progressed very rapidly, a large number of houses being built as if by magic, and by the winter of 1855, the population had increased to 1,500 people, and several hotels, stores, etc., opened. From that date to the present time Leavenworth has continued to grow apace, and she now numbers 20,000 inhabitants.

"During the summer of 1856 the principal business part of the city was destroyed by fire. This disaster did not seem to check or retard the growth of the city materially, for in the space of a few months the buildings burnt were rebuilt, elegant brick blocks taking the place of the cottonwood frames that were destroyed. The census showed the population to be upwards of 10,000 in 1858.

"Leavenworth is situated in the midst of a beautiful section of country with soil of surprising fertility, and in the summer one seems to be in the midst of a vast garden, skirted and interspersed with groves, hedges and cultivated fields; its prairies gemmed with countless flowers, all render its environs delightful, and combine to make it a beautiful spot.

"There are in the city twenty-two churches, of various denominations. Some of them are very elegant edifices. The new Catholic Cathedral is doubtless the finest building west of St. Louis, costing $130,000, and the Baptist Church, lately finished, is a credit to the body and an ornament to the city. Leavenworth is also well provided with public and private schools. The public schools are well organized and in a flourishing condition. There are several private academies.

"Leavenworth supports five daily newspapers, four English and one German. The *Kansas Farmer*, which is devoted to agriculture, issued monthly, is also published here. These papers are well conducted journals, and their advertising columns are suggestive of profit, as well as an index to the intelligence and enterprise of the business men of the city."

The fine bridge over the Missouri River at that point, is now completed, the work being begun by the Kansas and Missouri Bridge Company on the 20th of July, 1869. The plan of sub-structure is an application of the pneumatic system to the peculiar and difficult features of the Missouri River, and was designed by the Chief Engineer, General Wright. The superstructure is of iron, and of the plan known as "Post's Diagonal Truss." The Leavenworth Coal Company is now getting out what is considered the best quality of coal in Kansas, with the one exception of the Fort Scott rusty coal. Their shaft is 710 feet deep, and the vein two feet in thickness. Their machinery for hoisting, etc., is most complete, and they are now getting out an average of 40,000 bushels per diem. This year they intend to sink a second shaft. Leavenworth has twenty-six churches, eight banks, and a large number of very fine business houses.

Fort Leavenworth is prettily situated about two miles from the city. This post was established in 1827, and was then and for some time thereafter, a frontier post. It has been for some time, and is now, occupied as Headquarters Department of the Missouri, and furnishes, in the large storehouses adjacent to the post, a depot of supplies for a large number of the military posts west of the Missouri River. At this writing (March, 1872,) the garrison consists of Company "K," Third Regiment of Infantry and Band, and five Companies ("A," "G," "H," "J,"and "K,") of the Fifth Regular Infantry, Gen'l N. A. Miles, commanding.

LAWRENCE.

MAIN LINE CONTINUED.

12 Miles from Stranger. 38 Miles from Kansas City.

To the tourist and visitor from the East, the towns and cities along the line of the Kansas Pacific Railway will present a crude, unfinished appearance, which is perfectly natural they should, considering they are all as yet in their early infancy. To this rule, however, Lawrence, the county seat of Douglass county, forms one pleasing exception; her broad streets and substantial brick business houses and handsome suburban residences, her flower gardens, nurseries and vineyards, and many metropolitan refinements not generally looked for in this far Western world, give her more the appearance of a town of twenty or thirty years' growth, such as we find in the older portions of this continent. Not only the city itself, but the surrounding country partakes of the same character. From the summit of Mount Oread, on which stands the State University, a truly magnificent structure, you look on a very beautiful landscape. At the base of the hill lies the city; to the north winds the Kansas River, with its thickly wooded banks, with a ridge of hills in the background; and to the east and south may be seen the green fields and luxuriant hedges of a hundred fine farms, with the rich valley of the Wakarusa River in the distance. Lawrence has a history, too; for she has three times been besieged, and on the 21st of August, 1863, was entered and sacked by Quantrell and his raiders, who burned down the town and murdered upwards of a hundred unarmed citizens. This was the first town settled in Kansas by the Free State men, the first Company arriving in August, 1864, from Boston, under the charge of one C. H. Branscomb, and it became at once the headquarters of the Free State operators, and continued so until Kansas became a State. The population now numbers upwards of 12,000. Buildings, both for business purposes and residences, are being erected in every section, and a very large trade is carried on in her midst. The city proper covers about three square miles of second bottom lands on the south bank of the Kaw river, but the handsome residences of her well-to-do citizens, beautify the outskirts and cover the sides and summit of the adjoining bluff. She has her street railroads, gas works, flour mills, woolen mill, soap manufactory, and, above all, the State University, towards the development of which great institution, Lawrence contributed upwards of $160,000. In churches she abounds, having fifteen of them. The Episcopalians, who are comparatively a small body, have a picturesque little building, and are now erecting a new church. The Congregationalists have a church that cost about $40,000, and an organ worth $3,500. The Baptists also have a handsome building, costing about $30,000. Her schools the citizens take especial pride in, and over $50,000 has been laid out on school houses, which are six in number—one central and five ward schools. The current expenses of these are said to exceed the sum of $10,000 annually. On the north side of the river are the station, freight sheds, engineers' offices, and large repair shops of the Kansas Pacific Railway, and quite a large number of houses, stores, etc. This is called North Lawrence, and is united to the city proper by two handsome bridges over the Kaw River. One of these is the Leavenworth, Lawrence & Galveston Railroad bridge, and the other a bridge for general traffic. The main street has been lately paved, partly with Ballard and part with Wycoff pavement. There are in this place four banks—the First and Second National, State Bank and Savings Bank; six hotels, eight livery stables, and the best race track in the Western country. There are also two fine public halls, one of which, Liberty Hall, is universally considered to be the finest west of St. Louis.

PERRYVILLE.

12 Miles from Lawrence. 50 Miles from Kansas City.

WAS LAID out by the Kaw Valley Town Company in 1867, from which time it has grown steadily and permanently. It is now incorporated as a city of the third class, and has its municipal laws and government. The surrounding country is composed of rich bottom land and gently rolling prairie, and is thickly settled. The price of the land varies from $10 to $50 per acre, according to locality and improvements. Perryville has three dry goods stores, four groceries, two drug stores, and two boot and shoe stores. There are two churches—Presbyterian, Rev. George Irwin, Pastor, and a colored Baptist Church. A spicy weekly paper, the Perry *Times*, is published here and ably edited by Mr. Henry Evans. Two school-houses, one of brick and one frame, have been erected, and are well attended. The present population is 600. The following are the names of the most prominent agriculturists and stock raisers in the neighborhood: Messrs. Josiah Copley, J. W. Hinton, Jno. Gifford, P. M. Jones, G. J. Stark, Henry Sutter, and S. J. Plumer.

MEDINA.

9 Miles from Perryville. 58 Miles from Kansas City.

IS A prosperous village, situated three-quarters of a mile west of Grasshopper river, and is the centre of a district celebrated for the fertility and thriving condition of its numerous farms, descriptions of some of which are appended. The Grasshopper river flows in a southeasterly direction, and empties itself into the Kansas or Kaw river opposite the village of Lecompton. This stream is well timbered with oak, walnut, hickory, elm and soft maple, and can be made very useful for manufacturing purposes, as there are a number of falls where power can be had to drive almost any kind of machinery; in fact, there are already some flouring mills and one woolen factory on this river. The Grasshopper Valley is extremely rich and fertile, and peculiarly adapted to farming and stock raising. The town site of Medina was laid out in May, 1865, by Capt. Jerome Kunkel, who still resides there and owns considerable property in the place. The village boasts a fine school-house, built of stone, and costing upwards of five thousand dollars, which is well attended daily, and one church, belonging to the United Brethren, Revs.

Shepherd and Weaver, pastors. The Methodist denomination have also an organization there, Revs. Orington and Madison, pastors, so that the educational and spiritual interests of the district are well attended to. There are three general stores, doing a business of from twelve to fifteen hundred dollars per month, a hotel, drug store, blacksmith shop, wagon builder, and Capt. Kunkel's steam flouring mill. The principal farms in the neighborhood are as follows:

That known as the "Rising Sun" farm, owned by Capt. Kunkel, and situated on section twenty of the half-breed Kaw lands, formerly the old Rising Sun town site. It is situated at the junction of the Kansas and Grasshopper rivers, opposite Lecompton. In the year 1858 this land was covered with heavy timber, but is now a well-cleared, flourishing farm.

Next is a fine farm belonging to Mr. P. Bowers, noted as being one of the best arranged and carefully kept in that part of the country. It lies on the north bank of Kansas river and joins Medina on the south. Adjoining this are the farms of Messrs. A. M. Fowler and E. McClain, which were some of the first lands cultivated in that valley.

Messrs. V. Brown's and E. Conklin's farms are situated about one mile northwest of Medina, and were purchased some two years ago from Mr. Crawford, formerly Governor of Kansas, for the sum of twenty-two thousand dollars, the land formerly belonging to the Delaware Indians.

The Kaw Valley, from Medina to Grantville, a village and station eight miles farther west, is about three miles wide, and considered by the settlers as one of the garden spots of Kansas. Corn is the principal crop grown, and has been always raised for market, but for the last year or two, the farmers have turned their attention more to stock raising, and using the corn for feed, which plan proves the most profitable. North of the valley is fine rolling prairie, formerly part of the Delaware Reserve, the soil being more adapted to growing small grains than that of the valley, which is a rich black loam from four to six feet deep, and not requiring rest or fertilizers for many years. Mr. Thomas Kirby, the County Treasurer, owns a farm two miles north of Medina, on the Grasshopper river, formerly known as the "Old Indian Mill Farm" part of which is said to have been under cultivation for the last thirty years, and for ten years past a crop of corn has been raised on it, generally without manure or fertilizers, and yielding an average of fifty bushels to the acre. Well improved farms in this valley are worth from fifty to seventy-five dollars per acre. Prairie land from five to fifteen dollars, according to quality and location. The number of votes polled in the above mentioned district at the last general election was 330. Population about 1,000.

NEWMAN.

3 Miles from Medina. 54 Miles from Kansas City.

Is a station three miles west of Medina, and has one church belonging to the Catholic denomination, Father O'Reilly, pastor, a school-house, general store and a grain warehouse. The most prominent farmers in the vicinity are Messrs. A. Allen, A. Shoner, John Teg, George Rushmore, and James True. Messrs. Allen and True are extensive dealers in native and Texan cattle and hogs. The surrounding country has been described under the heading "Medina."

GRANTVILLE.

5 Miles from Newman. 60 Miles from Kansas City.

Is located eight miles west of Medina, on the west bank of Muddy Creek, which flows from the northwest and empties into the Kansas River two miles southeast of Grantville. The creek is well timbered with oak, walnut, hackberry and elm, but is hardly large enough for manufacturing purposes. Of farmers and stock dealers in this neighborhood, the principal ones are Messrs. J. Clinans, Ingram, R. Smith, Sam'l Wilson, Tyler, John Branscombe and Sam'l Koffman. Messrs. Branscombe and Koffman deal largely in hogs and native and Texan cattle. The land in this vicinity was settled as early as 1855, and sold by Government in the June of 1857 for the use and benefit of the Delaware Indians. It is a fact worthy of notice that the farmers here are mostly using Osage Orange for their fences. Mr. Branscombe's farm of 180 acres is enclosed by a good fence of posts and boards, besides a hedge of Osage Orange to take the place of the former when it gives way. This shrub grows very luxuriantly in the Kansas Valley. The first passenger train of the Kansas Pacific Railway passed through Grantville on the New Year's day of 1866.

TOPEKA.

6 Miles from Grantville. 66 Miles from Kansas City.

THIS city, the capital of the State, was first located on the 5th of December, 1854, by Messrs. C. K. Holliday, F. W. Giles, D. H. Horne, Enoch Chase, J. A. Heckay, J. E. Greenwood, and T. G. Thornton. It is situated on the north bank of the Kansas River, in the county of Shawnee, and is surrounded by a rich and fertile country. The population of Topeka amounts to about 9,000. The county of Shawnee has an area of 576 square miles, and a population of about 18,000, and is well supplied with wood, water, coal and building stone; streams to the aggregate length of 150 miles course through it, all of which are lined on either side with timber, consisting chiefly of walnut, oak, hackberry, elm, hickory, sycamore, maple, and cottonwood. There are eleven iron bridges in this county, and her taxable property for the year 1871 amounted to $6,500,000; that of the city reaching the sum of $2,600,000. The most notable feature of this city, is the Capitol buildings, which were permanently located in 1861, and have been built at a cost of over $400,000. This is indeed a magnificent structure; built of the "Junction City Marble," or white magnesian limestone, it presents a truly elegant appearance, and is an ornament to the city and a credit to the State. Next worthy of notice is the bridge over the Kansas River, of the description known as "King's Iron Tubular Bridge." It is 900 feet long, composed of six spans resting on solid stone piers, rising from the bed of the river, and is one of the most thoroughly built structures of the kind to be seen in the Union. The school property of Topeka is valued at about $80,000, with accommodations for 1,200 scholars, and these schools, for arrangement and management, are inferior to none, East or West. Favorable mention should be here made of the Topeka Female Seminary, which has at this writing an attendance of 107 pupils, under the superintendence of an able and faithful Principal, the Rev. J. N. Lee, A. M.; the Washburn College, all of which establishments will be found fully described under the head of "Institutions of Learning," at the end of this book. The facilities for spiritual education in this city are also of the best. Grace Church (Episcopal) was organized by Rev. Chas. Callaway in 1859, the church edifice being begun in 1860, and completed in 1865. It is a very pretty stone building. Rev. John Bakewell is the Rector. The First Presbyterian Church, organized in 1859, was much retarded in its growth by the excitements that preceded the civil war, and other influences; but in 1865, on the advent of peace, the

Presbyterian Church of Topeka revived, and from that date to the present time, the growth has been rapid. It has had its full representation, as about thirty of the ministers and churches are in or near the valley of the Kansas in the neighboring country. There are in the Presbyterian Synod of Kansas 100 ministers and 115 churches. The first Congregational Church was organized in 1855, in a small cabin owned by one of the members. They met statedly for worship in school-houses and public halls until 1860, when a church edifice was erected on the corner of Harrison and Seventh streets, at an expense of $7.000, the exceedingly eligible site being donated for the purpose. The membership has increased from 15 to 150. The church has had four pastors, viz: Rev. Lewis Bodwell, who has twice filled that position, Rev. Peter McVicar, D. D., now President of Washburn College, Topeka, Rev. J. G. Merrill, State Superintendent of Missions, and Rev. Linus Blakesley, the present incumbent. They contemplate building, before long, a more convenient and commodious house of worship. The Second Congregational Church, composed chiefly of colored people, was organized in 1863, and has a present membership of about 20. Their church property is worth $3,000. They have no regular pastor at present, but a flourishing Sunday School, under the charge of Chas. Sexton, Esq., a well known friend of the colored race. The Congregational Church in North Topeka was organized in 1869, and worshipped for a year in Van Horn's Hall. They have greatly prospered, and are now in a very flourishing condition. They number about 40 members, under the pastoral care of Rev. T. W. Jones, an eloquent Evangelist. They have recently completed an elegant chapel costing over $3,000, an ornament to that part of the city, and which was dedicated in August, 1871, free of debt.

The United Presbyterian Church, organized during the past year by its present pastor, the Rev. J. T. Wilson, is in a flourishing condition. It has 30 or 40 members, and will erect a handsome church edifice in the city next year.

The First Baptist Church is in a flourishing condition under the parental care of Rev. E. Taylor. They have a neat and commodious chapel, which cost $15,000. The church has 130 members, among whom are some of the most wealthy and influential families of the city.

The membership of the First Methodist Episcopal Church is about 200, and is presided over by Rev. D. P. Mitchell, pastor. They have a very commodious church edifice, seating about 700 persons.

There are also two Lutheran Churches. The one has a nice, comfortable church building, with a membership of about fifty; and the other, (Scandinavian,) has about the same number of communicants, and have commenced the erection of a church building.

The newspaper business is represented here by the "Commonwealth," with a weekly circulation of 3,000 and a daily of 1,500; the "State Record," weekly, circulation 2,000; the "North Topeka Times," weekly, circulation 500; a German paper, weekly, circulation 800; the "Kansas Educational Journal," 3,000, and the "Kansas Magazine," edited by Captain Henry King, and published monthly by the Kansas Magazine Publishing Company at $4.00 per annum, with a circulation of 5,000. The Record Printing Company has a very complete building, and are doing a good business in this branch of industry.

There are six banks—The Topeka Bank and Savings Institution, the Kansas Valley National Bank, the Capital Bank, and three private banks. Topeka also boasts of four flouring mills, with several others in the country.

The merchants in this city have a large trade from the West and Southwest, especially in prairie hides, flour and groceries. Several extensive nurseries have been established for the supply of fruit and ornamental trees and shrubbery, together with vineyards and orchards, abounding yearly with that choice fruit for which Kansas is so justly celebrated. The principal hotels are the "Teft House," Capitol House, and Fifth Avenue Hotel.

The Topeka Directory for 1872 contains the following concerning the first settlement of that city: "The last trip of the last boat that steamed up the Missouri River from St. Louis in the autumn of 1854, was made by the "Lenora," which landed a party of brave and sturdy adventurers at Kansas City. Of the party, fourteen immediately set out on foot for Lawrence, arriving there on Saturday night, and remaining over Sunday. On Sunday evening they held a meeting to determine a plan of action. Col. Holliday and Gov. Robinson attended the meeting, the former gentleman being here introduced to the party for the first time. At that meeting the present town site was discussed. A committee of four was appointed to visit the place and report their views concerning the same. The committee consisted of Daniel H. Horne, F. W. Giles, L. G. Cleveland, and S. A. Clarke. On Monday morning this committee, accompanied by Col. Holliday, Governor Robinson, and Milton C. Dickey, took up their line of march up the Kansas river to a point twenty-five miles west of Lawrence. The party arrived here on Monday evening, and found Enoch Chase, Jacob Chase, and George Dewis engaged in constructing a log house at the foot of Kansas avenue, near where the old well now stands. The party immediately set to work to assist the latter in fitting the log house for a night's shelter. The ten slept in the log shanty that night. The next morning D. W. Horne arose at daylight and made a thorough inspection of the whole town site. At breakfast he informed the party of his determination to remain. Immediately after breakfast articles of agreement organizing a town association were signed by every man present. The remainder then came up from Lawrence, and within two weeks the association employed a surveyor to lay out the town into lots, streets and alleys. This was the beginning of Topeka."

On New Year's six years ago, the first passenger train arrived on the Kansas Pacific Railway from the East, bearing an excursion party from Lawrence with General James H. Lane in command. During eleven months of the past year, the total cash receipts of the Kansas Pacific Railway at Topeka amounted to $525,822, and the total pounds of freight handled was 207,281,485, or 10,364 car loads; which will give some idea of the rapid increase of business.

The improvements made by the city in 1871 were to a great extent of that permanent character that make the transition from a town to a city, while the lower parts of the city, which required road making and draining, have received their full share of improvements in streets formed and ditches dug. During the past year, there have been laid 2,500 feet of curbing; 2,500 feet of guttering; 11,128 square feet of paving; 9,016 lineal feet of sidewalk.

Topeka is the northern terminus of the Atchison, Topeka & Santa Fe Railroad, extending southwest to Newton, a distance of 136 miles.

SILVER LAKE.

10 Miles from Topeka. **77 Miles from Kansas City.**

ROSSVILLE.

5 Miles from Silver Lake. **83 Miles from Kansas City.**

ST. MARY'S.

7 Miles from Rossville. **90 Miles from Kansas City.**

Is LOCATED in the southeastern portion of Pottawatomie county, near the junction of Jackson, Shawnee and Wabaunsee counties, and is one of the principal commercial points of the well-known Pottawatomie Reserve. It is but twenty-five miles west of Topeka, and seventy miles from Leavenworth, the Kansas Pacific Railway running directly through the town. The town is pleasantly situated on the south side of the slope land, a quarter of a mile north of the Kansas river, and from its natural facilities and progressive character of its inhabitants seems destined to become a most important town. The scenery as viewed from the up-land portion of St. Mary's, extending for many miles up and down the celebrated Kansas Valley, with its broad and beautiful bottom land and numerous timbered streams, and the gently undulating prairie beyond, presents a landscape of true natural beauty. Adjoining St. Mary's are some of the finest and most productive farms in the valley, and the settlers there challenge the rest of the State to show a finer section of agricultural country thirty miles square than that embraced in the Pottawatomie Indian Reserve. The Kansas river in this vicinity, and its tributaries, prominent among which are Cross creek, Mill creek, Vermillion creek, and Soldier creek, furnishes well watered and timbered farming lands, and gives to the town that sound basis, so necessary to build up a place of any considerable size. St. Mary's was incorporated in April, 1871, has its mayor, councilmen, police judge, and marshals, and contains as much wealth and as many business houses as most towns of its size on the K. P. R. W. It has just erected a substantial iron bridge (King's patent) over the Kansas river at this point, which opens up to its trade the whole of Wabaunsee county, including the fertile valley of Mill creek. The organization of St. Mary's as a village, dates back but two years, and as a town but eight months; but its history and identity commence twenty-three years ago, when a few devout missionary fathers of the order of Jesuits selected this spot out in the then "Indian country" for the establishment of their mission station. By the aid of Government, suitable buildings were erected, and here they labored for the civilization of the wild Indian, and now, their work being accomplished and their undertakings crowned with success, they have erected on their grounds adjoining the town, the largest and most complete institutions of learning and education, in existence west of the Mississippi. The Ladies' Seminary, completed last fall, is a magnificent brick building with massive stone foundations, four stories high and having a frontage of 100 feet. This institution, called "The Seminary of the Sacred Heart," is a most worthy one. The course of education embraces the various elementary as well as the higher branches of a finished education. Propriety of deportment, personal neatness and the principles of morality are objects of unceasing attention. Extensive grounds afford the pupils every facility for useful bodily exercise. Their health is an object of constant solicitude, and in sickness they are attended with maternal tenderness. Difference of religion is no obstacle to the admission of young ladies. The annual fee for board and tuition is $130.00; music, drawing, and foreign languages extra.

The college building, when finished, will have a frontage of 400 feet, and accommodations for 1300 students. The terms of this college, including tuition, board, washing, and everything except books and stationery, will not exceed $150 per session of ten months.

The educational advantages of this town are certainly unsurpassed, it having most excellent public schools, besides the institutions above mentioned. The religious denominations are mostly represented, the Congregational, Swedish, and Catholic Churches being already established; the Baptists, Methodists and Presbyterians uniting in a common congregation with the Congregational Church. The lands in this neighborhood are held in part by the Atchison, Topeka & Santa Fe Railroad, and are for sale at from $5.00 to $20.00 per acre. The balance is held by the Indians themselves by patents issued from the Government direct, and are for sale at from $5.00 per acre upwards. It must be remembered that this Reserve has been open to the white man but two years, and consequently is not as thickly settled as the Government lands farther west. St. Mary's has a population of one thousand, and contains five general stores, four groceries, two hardware, two drug, one saddlery, two butchers, one jeweler, one tailor, four hotels, one lumber yard, one blacksmith, and the St. Mary's land office, presided over by Messrs. Sedgwick & Chansey, two gentlemen who are always ready to show strangers over, and give information concerning, St. Mary's and the neighborhood.

BELVUE.

6 Miles from St. Mary's. **96 Miles from Kansas City.**

THE FOLLOWING accurate description of this new town and the surrounding country appeared in the Kansas City *Journal of Commerce* in August last, written by their special correspondent:

"It has long been a source of wonder to visitors to this country to notice the sudden springing into existence of towns and villages, and their subsequent rapid development; a few energetic men get together, who own land which they think would be a desirable site for a town, either on account of the probability of some projected railway line passing through it, or for its natural facilities and advantages; they lay eighty acres or so out into town lots, advertise it, and in the course of a month or two we have a flourishing village with stores, postoffice and a newspaper, (and most likely a base ball club and brass band). This is one of the greatest evidences of the flourishing condition of this country. Your correspondent, in company with a friend lately out from England, has just returned from a visit to one of these infant cities, and very healthy and promising the "little stranger" looked. The town of Belvue (about three months old,) is situated on the line of the Kansas Pacific Railway, 97 miles from Kansas City, and about half-way between St. Mary's and Wamego, and for picturesque beauty and business advantages is hard to be surpassed. On the north the town is skirted by the old government road from Fort Leavenworth to Fort Riley, and a few hundred yards further back by a ridge of hills or high rolling prairie, whose undulating outlines form a very pretty background, as it were, to the picture, and act as a protector from the north wind in winter time. The beauty of the northern aspect is also heightened by a heavy belt of trees in the valley of Lost Creek, which breaks through the hills at this point on its way to the Kansas River. Lost Creek valley is thickly wooded with oak, elm and cottonwood, and the adjacent country thickly settled. It extends back for upwards of twenty miles. Seven miles north of Belvue it intersects Vermillion Creek, which also runs south to the Kansas River, and bounds the town on the west side. This creek is also heavily wooded. On the east, at a distance of two miles, may be seen the rich green foliage of the trees that grow on the banks of Deep creek. On the south flows the Kansas River, at a distance of seven-eighths of a mile from the depot, and three-fourths of a mile from the south limit of the town. The main street is named Noble avenue, (after the popular Assistant Superintendent of the Kansas Pacific Railway,) and in a line with the street a ferry will be established which, it is expected, will be running in about two weeks, the cable and boats having been already provided. The owners of the town site, Messrs. A. J. Baker and Malcolm Gregory, are the "right men in the right place," hospitable in the extreme to their visitors, and thoroughly business-like in their transactions; they have made up their minds to observe a liberal policy in the conducting of their town affairs—a policy which is bound to ensure success in such undertakings. They will sell their lots at from $10 to $60, according to the position of the lot, and what the man will do who buys it. They want no speculators, but men who will settle down and go to work—open a store, carpenter shop, shoemaker's shop, and such like. To these men they offer the strongest inducements.

"Their Railway depot, which is one of the neatest on the road, is built on solid stone abutments, and cost them $2,100. At present it answers both the purposes of depot and church, for a Presbyterian congregation has already been organized, and services are held there weekly. A choir is likewise in preparation. We were very kindly received at the station by Mr. Malcolm Gregory, and his nephew, Mr. Julian Gregory, the Kansas Pacific Railway Company's agent there, and having been introduced to Mr. Cozad, the lawyer and land agent of the town, we went over to the hotel, at present kept by Mr. Baker, and had a comfortable cold lunch, not the least luxury of which was the fresh butter and white home-made bread, so different to the blackguard mixture of saw-dust, alum, bean-flour, and other abominations, retailed in our cities under the name of "baker's bread." We then visited lawyer Cozad's office, where we found Dr. Reeder, from Illinois, who is just completing his house, and expects his wife to join him next week. The doctor has his dispensary there for the nonce, and logic, physic and land are retailed from the one emporium. Adjoining the office is the lumber yard of Messrs. Kullak & Bell, and it is needless to say that Mr. Kullak, who is about the largest and best known lumber dealer in Kansas, has done his share in first-class style. Then there is a large flouring mill, built of limestone quarried near by, and also a handsome school-house, said to be the best in the county. The blacksmith shop, and store and postoffice were also visited, as well as some fourteen other houses, when Mr. Cozad drove up with a light spring wagon and a pair of Indian ponies, which he uses to show land to visitors, and proposed a drive, which we were only too glad to take advantage of. We had brought two breech-loaders with us, so we took them along, as Mr. Cozad mentioned that he had a weakness for prairie chickens at supper. We drove first to the river, where we got a glimpse through the trees of the beautiful valley, which, traversed by Mill Creek, runs southward to Newbury and beyond, and contains numbers of thriving settlers.

"We then made a circuit of the farms, some 30 of which surround the town at a distance of one to two miles. We examined the cornfields and killed six brace of prairie chickens, or more properly speaking—grouse—in less than a half hour. We saw several flocks of these splendid birds, which were flushed by an uneducated dog, which followed the wagon, and were told that the whole of that district abounds with game, wild ducks, geese, grouse, quails, etc.

"In a commercial point of view this town has the best of chances to succeed; being the nearest shipping point for the town of Vienna, on the north, and Newbury, on the south, and connected with these places by the best of natural roads, and surrounded by a rich agricultural country, it will only be by mismanagement that it can fail, and with such men as Messrs. Gregory and Baker at the helm this is most unlikely. The managers are anxious to get a competent man with some means to run the hotel and farm attached to it, and to such a man they will make the terms of purchase very easy. Any one who would put a storehouse there and buy grain and produce, and ship it eastward, would also make a good deal of money. The land in this district has only been in the market two years, and having been selected by the Pottawatomie Indians when they had the choice of the whole country, is necessarily very fine. The Kansas Pacific Railway Company owns a one-fifth interest in the town."

WAMEGO.

6 Miles from Belvue. **103 Miles from Kansas City.**

Is THE largest town in Pottawatomie county, and one of the principal market towns for that and Wabaunsee county. This is an eating station for the Kansas Pacific trains and one where the best of tables is laid. The round-house and repair shops of the Kaw Valley Division of the Railway are also located here. Wamego has two grain dealers, two lumber yards, two general stores, three dry goods, three groceries, two drug, two hardware and stove stores, two fancy goods and millinery, two furniture, two clothing and two shoe stores, one banking house, two good hotels, one newspaper office, two real estate agents, two blacksmith shops, two good livery stables, and the usual complement of mechanics, masons, carpenters, etc. The Presbyterians have a neat church edifice, the Episcopalians, Methodists, Baptists, and Congregationalists have regular services in appropriate halls rented for the purpose, and are preparing to build churches. The public schools are graded; a free school-house, erected two years since, has become inadequate to wants of the community, and there will probably be a much larger one built during the coming season. Three teachers are now employed. In addition to the public schools there is a private one for young ladies. Wamego is settled chiefly by persons from the Middle States, and the society there is cultivated and refined. The surrounding country is fertile and picturesque. Vermillion creek, Rock creek, Indian creek, Adams and Coal creeks on the north; Mill creek, Antelope, Wells, and Betty creeks on the south of the Kansas river, with their numerous tributaries, present a large area of rich bottom lands, and gently rolling up-lands, which offer great facilities to the fruit grower, stock raiser, dairyman, or farmer. Good up-land farms can be had at from $4 00 to $8 00 per acre, and lands through which living streams run can be had at from $6 00 to $10.00 per acre. Good building stone abounds in Pottawatomie county, and excellent brick is made. A wrought-iron bridge 900 feet long is now being built over the Kansas river at Wamego, and this will be one of the most elegant structures of the kind in the State. Wamego contains about 1200 inhabitants.

ST. GEORGE.

7 Miles from Wamego. 110 Miles from Kansas City.

Is A small village and station having a population of about six hundred, and is possessed of a good stone school-house, two dry-goods and grocery stores, a drug store, and lumber yard, with two churches—Baptist, Rev. Mr. Scott, pastor, and Christians, Rev. Mr. Goodwin. The land in the neighborhood is well watered by the Kansas and Blue rivers, Rock creek, and Pleasant Run creek, and answers the same description as that described as surrounding Manhattan. Price, $10 to $25 per acre in the vicinity of the village.

MANHATTAN.

Is LAID out at the confluence of the Kansas and Blue Rivers, which latter stream is swelled by Wild Cat Creek and three others, which empty themselves into it within ten miles from the mouth. It is the county seat of Riley county, and has as pretty a location as any town on the Kansas Pacific Railway, and was first settled in 1854, by a colony from Ohio, all the members of which were well educated, and nearly all members of the Methodist Episcopal Church, thus giving the place at its start an intellectual and religious character which it has since sustained. They are said to have migrated from Cincinnati in a small steamer which they purchased for the purpose. They steamed down the Ohio, up the Mississippi, up the Missouri, and then up the Kansas River to the mouth of the Big Blue. That was their destination, and the boat never returned. It was kept for a dwelling place until provision could be made for the families on shore, but before they left the boat and before a single dwelling place had been erected, the spot for a school-house was selected, and measures taken for its being built, so that they might have at once a school for their children and a place of worship for all. Mr. Josiah Copley, who visited this place in 1867 and wrote a series of letters to the Pittsburgh *Gazette*, under the heading of "Kansas and the Country Beyond," wrote thus flattering of Manhattan:

"Take it all in all, I think Manhattan and its surroundings the most beautiful part of Kansas that I have seen, which is the same as saying, that it is the most beautiful portion of this earth's surface upon which my eyes ever rested. The Rev. Alexander Sterrett, who, by a mandate which it was not in me to resist, made me his guest, took me in his buggy to the summit of Blue Mont, a conical eminence some two hundred feet high, about a mile from town. Such a combination of the grand and the beautiful—the soft green of the gracefully undulating prairies, the dark rich foliage of the trees which skirted and marked the winding course of three streams, the Kansas, the Blue, and the Wild Cat, for miles north and west and east, the beautiful farms with which the broad landscape was dotted all over, with their comfortable-looking and really pretty stone houses, and the bright and quiet-looking town in the valley beneath, with the College on the rising ground in the rear—is rare indeed. Senator Wade, who, with others of the Senatorial excursionists, visited this spot, was greatly delighted, and uttered the rather strong remark, that the view from the high mountain, where, long ago, the Evil One spread the panorama of temptation before the eyes of the Redeemer, could have been nothing to that."

A fine iron bridge has been built over the Blue River, and the town enjoys a lucrative trade from the fine country which surrounds it for miles in every direction. This town is chiefly celebrated for its educational facilities, having besides its Primary and High Schools, the Kansas State Agricultural College. The tuition in this fine institution is free in all its departments, and the Faculty is composed of men of acknowledged superior ability. The President, Dr. Denison, is well known as a man of deep erudition; Professor Mudge, formerly State Geologist, is one whom any college would be proud to own in its faculty, while the Professors of Agriculture, Agricultural Classics, Agricultural Chemistry, Mechanical Arts, and Modern Languages, are men who stand high in their respective professions. For full description of this College see article under head of "Institutions of Learning."

Of business houses Manhattan is possessed of four dry goods stores, nine groceries, four drug stores, two boot and shoe, three furniture, three jewelry, two millinery and fancy goods stores, with three well kept hotels. There are also two banks and three newspapers—the *Nationalist*, (weekly,) the *Homestead*, (monthly,) and the *Kansas Land Register*. Nor is the town behindhand in facilities for spiritual education, for it has six churches, viz: The Episcopal Church, Rev. D. W. Cox, Rector; the Presbyterian, with a large new building, Rev. J. M. Reed, Pastor; Congregational, Rev. R. D. Parker; Methodist, Rev. J. M. Sullivan; Baptist, Rev. Mr. Sawyer, and the colored Methodists' church.

Mr. T. J. Lyman, one of the editors of the New York *Tribune*, having lately visited this district, said in a recent address at New York, before the "Farmers' Club," that "the best and most attractive country in the West is west of the Missouri River, and is bounded on the north by the Platte River, on the south by the Kansas River, and on the east by the valley of the Republican." This includes Manhattan and Riley county. He also mentioned particularly the valley of the Blue River, on account of its fertility, and speaking of its fine building stone and species of marble, that exists plentifully in the vicinity, said: "It does not cost any more to build a substantial and handsome stone house in Middle and Western Kansas than it does to build a wooden one here in New York." Of flourishing farms, there are many in the neighborhood, chief among which are: One situated five miles north of the town and owned by Judge Chaffee, who also possesses a fine herd of blooded stock; a stock farm two miles from town, owned by Mr. Kearns, who has the largest herd of cattle in the district; and Judge Blains' fruit farm. Grain and fruit are also extensively cultivated on the farm belonging to the Agricultural College.

The population of Manhattan is 1,500. At the last general election 545 votes were cast, and in a district of ten miles round there were 968 votes polled.

OGDEN.

OGDEN owes its origin to the destruction of Pawnee City, which, by order of President Pierce, with Jefferson Davis Secretary of War, was abandoned in 1865. The location of this town was on the Military Reserve, and the President considering the land needed for military purposes, refused to permit it to be "entered" and a town to be built there. At the time of its destruction, Pawnee consisted of two substantially built stone houses, each two stories high, and about one hundred houses and tents. The two stone buildings, in one of which the first Territorial Legislature of Kansas, convened by Gov. Reeder, anxious to be as far as possible from Missouri influences, held its first session, still remain. This Missouri influence was, however, strong enough to remove the capital, a few weeks later, to Shawneetown, on the eastern border of the State. A portion of the inhabitants of Pawnee, on leaving that place, selected the present site of Ogden, just east of the Military Reserve, which, at present, is six miles square, for a new town, and named it Ogden, after Major Ogden, who established Fort Riley.

There were ten proprietors, the principal one being C. R. Mobley, Esq., now residing in Tampa, Florida. In 1856, Rev. J. N. Parsons, D. L. Chandler, B. B. Edmunds, and twenty others, settled here, and received from the proprietors a grant of one-half of the town lots on the consideration of their erecting a saw-mill. The same year the gubernatorial "mansion" was removed here from Pawnee and used as a hotel, a Mr. Schmidts, proprietor; a general store was opened by a Mr. Johnson from Missouri. The winter of of 1856-7 being unusually severe, and the inhabitants having but indifferent protection from the severity of the weather, and an insufficient supply of food and clothing, with Leavenworth one hundred and twenty miles distant, the nearest point from which supplies could be obtained, which must then be hauled here in wagons, the people suffered so much that when spring opened many of them returned to their former homes in the East; those, however, who remained went energetically to work, and before the close of that year, matters had assumed a cheerful, prosperous aspect. At the saw-mill over 20,000 feet of lumber was manufactured; farms in the vicinity were opened; several stone buildings were erected, and the town continued to improve, notwithstanding a drought in 1860, until the breaking out of the rebellion in 1861; of the eighty-two votes in the township, forty-eight volunteered for three years' service in the army, most of whom remained during the war. The loss of so many active men much checked the rapid improvement then being made. Among the number who enlisted here was the Hon. James Harvey, present Governor of our State; several other members of this Company, who facetiously termed themselves the Ogden "Mudsills," a term Senator Hammond, of South Carolina, had, in a speech in Congress, applied to the masses of the North, were promoted to positions of honor and trust. Of course during the war but little improvement, comparatively, was made. A brief description of a few of the numerous farms in the vicinity will, perhaps, give an idea of the improvement since its close. Mr. Thomas Dixon has a stock farm of 520 acres, situated three and a half miles north of town; of this, 150 acres are under cultivation; about 100 acres are woodland, principally oak and walnut, with some hickory and elm. It is well watered by Seven Mile Creek, (these creeks were named in 1854 from their distance from Fort Riley at the point they were crossed by the Leavenworth road,) and several never failing springs. He has an abundance of water for almost any quantity of stock, and much unoccupied land in his vicinity furnishes wild pasture for any number of cattle. About 300 acres are enclosed with substantial stone wall, five feet high. The buildings, consisting of dwelling and two barns, are well-built stone structures. There are also two frame granaries; he has the capacity for storing 10,000 bushels of grain; has facilities for feeding 500 cattle; has on hand at this time 140 head of cattle, besides other stock; has 200 bearing apple trees and 80 bearing peach trees. He finds that Kentucky blue grass and red clover grow finely when pure seed is obtained; timothy does not do so well, but can be grown. Mr. Dixon came to Ogden without any capital, and his success shows that it is not indispensable, though a considerable amount could be invested with great advantage in this vicinity.

Mr. C. M. Dyche has a farm of 800 acres adjoining the town site of Ogden; 400 acres are fenced, 300 acres in cultivation. The fences are stone and Osage hedge; 900 rods stone wall and 600 rods hedge. The 300 acres in cultivation is low, valley land; 100 acres on the south side of the Kaw River, and the balance on the north side; of the unenclosed, 125 acres are wood land, principally cottonwood and walnut, balance in upland; has 30 bearing peach and apple trees. His dwelling is built of cut stone, 42x36 feet, with an L of 18 feet; is two stories high, with cellar and attic. The barn is three stories high; it is a "hill-side" barn, and the second story may be driven into from the upper side. The first story is used for stabling stock; second, for storing grain, etc., and the third for hay. The dimensions are 60x30 feet. In the lower story on the bank side is a never-failing spring, strong enough to furnish an abundance of water for 25 or 30 head of stock. His ice house is 10x12 feet. Has on hand at this time 150 head of cattle, 24 horses and mules, and about 12 head of hogs.

Theo. Weichselbaum has a stock farm of 600 acres, two and a half miles west of Ogden; 400 acres are enclosed, principally with stone fence; 300 acres are in cultivation; balance in pasture. Of the unenclosed, 60 acres are wood land, principally oak and walnut, with some ash and elm. Three Mile Creek runs through the farm, dividing the pasture from the cultivated part, affording plenty of water for stock. There are several strong, never-failing springs on the farm; one, over which a neat and substantial stone spring-house is built, is particularly large and the water is excellent. He has on this farm over 200 head of stock cows, and several hundred head of calves and young cattle. This farm is devoted exclusively to raising and feeding cattle. He has another farm of 400 acres, about one-half mile fenced, which is exclusively given to raising horses. There are on this farm between 70 and 80 mares and colts. There is a stream of water on each side of the place, with timber on their banks, affording fine shade and wind-break for the stock. Mr. W. is the owner of the celebrated black Norman Stallion, Leo, the premium draft horse of the State. Besides the two farms just described, Mr. W. owns another farm of 160 acres on Seven Mile Creek, through which the Kansas Pacific Railway passes. The greater part is bottom land, and is a very productive grain farm. Seven Mile Creek runs through it. All the land made by the creek unfit for cultivation is covered with walnut trees. A bluff on the north formed of magnesia limestone—an excellent building stone—makes a complete shelter from the north wind, and leaves between the bluff and the creek an excellent place for feeding cattle.

D. L. Chandler has a farm of 240 acres under cultivation. The fences are one-half stone wall, and the balance is wire. Wire fencing is much used in this vicinity. It is very cheap; the entire cost is about seventy-five cents per rod for a fence four wires high, and when properly put up, a very good fence. Gives most of his attention to growing corn, wheat, barley, potatoes, etc. His last corn crop was some over 2,000 bushels, an average of a trifle over 46 bushels per acre; wheat, 700 bushels, average 31 9-11 bushels per acre—the year before it was 37 1-2 bushels per acre; 460 bushels of barley, the average yield—smaller than usual—33 bushels per acre. He has 50 bearing apple and peach trees; the peach trees this season are very full. He has 85 head of cattle, besides other stock. Mr. Chandler, who is better known as "Doctor," resides in town, his farm adjoining on the East. The wrtter would be glad, if space permitted, to give a brief description of many other fine farms near here. The farming community is prospering finely, and the town, without doubt, will keep pace with it. There are two general stores and a book-store, with a circulating library in connection with it. Mr. Weichselbaum has a general store, the building dressed with magnesia limestone, 30x50 feet, and two stories high, besides cellar and attic, with the addition of two houses, 26x50 feet each. He has an extensive trade in grain and produce, most of which is shipped west, on contracts at the different military posts, and to private parties west. He has another store in connection with this at May-day, in Riley county, 30 miles north of this place, on Fancy Creek. It is in one of the best and most thickly settled farming regions in the State. The supplies for this store and the grain and produce taken in, are received and shipped from this point.

Mr. Fred. Crafts is the proprietor of the other store mentioned. Mr. Geo. W. Campbell is the proprietor of the book-store. At the Catholic Church, a small, stone building, mass is said on the third Sunday of each month, the Rev. Father Emily, from St. Mary's, officiating. At the Congregational Church, open for the use of the denominations, service is conducted by the Congregational Minister, Rev. John M. Morris, each alternate Sunday, and by Rev. M. Taylor, a Methodist minister, from Manhattan, each alternate Sunday. The school-house is two stories high, 25x40 feet, and built of stone. Mr. Dixon does an extensive business in grain, and during the past winter frequently paid on grain shipped $2,000 per month. His warehouse is 30x60 feet, and built of stone.

The hotel is three stories high, and built of stone. Since last December, the Ogden brewery has been in operation, and the beer manufactured is shipped to points east and west. The engines and machinery for running a steam brewery, are now on the way, and will be in working order by the commencement of the coming winter. A bridge will be built on the Kaw River at this point, which will give the place much trade that it does not, on account of a bad ford, at present enjoy.

Unoccupied land is worth from $5 to $10 per acre; improved, from $15 to $30.

FORT RILEY.

6 Miles from Manhattan. 183 Miles from Kansas City.

Is SITUATED on a high plateau of prairie on the north bank of the Kansas river, immediately below the confluence of the Smoky Hill and Republican Forks; Latitude 39° North, Longitude 96° 30′ West; and an elevation above the bottom lands on the east of about 60 feet. From 300 to 600 yards to the northeast is a ridge of limestone bluffs from 150 to 200 feet high, from which the post is separated by a small ravine, which serves as a drain. To the south and southwest the plateau slopes rapidly toward the Kansas river. On the slope runs the Kansas Pacific Railroad. The valley of the Kansas river at this point is nearly three miles wide, the distance from the river to the foot of the plateau, on which the fort is built, being about 2500 yards. The soil of the bottoms is a pale yellow loam, and very fertile. The post was established in the spring of 1852, and was first known as Camp Center, it being very nearly the geographical center of the United States, but was finally called by its present name after General B. C. Riley, United States Army. The mean temperature for the past fourteen years has been 54′ 49° F; hottest day, July 18th, 1859, 109° F; coldest, January 13th, 1862, 29° F. Average rain fall from April 1st to September 31st, 17 inches.

The post is built around a parallelogram 553 by 606 feet, the barracks for enlisted men consisting of six two-story buildings of hammered magnesian limestone, each intended for one company, and measuring 88 by 40 feet, with piazzas in front and rear for both stories. The guard-house is a two-story stone building, 43 by 20 feet. The quarters for married soldiers consist of nine log huts, two frame cottages, and one two-story frame building. The officers' quarters consist of six buildings of hammered limestone. The commissary and quartermaster storehouses are two frame buildings, one story high, and on the top of the quartermaster's building is suspended a bell by which the employees are directed to go and return from work. The ordnance building is a one-story stone building, 117 by 18 feet. The magazine attached to the post is a brick structure, 16 feet square, one story high, with a rock foundation. The hospital is a large building of magnesian limestone, situated 336 feet east of the middle of the east side of the garrison, and fronting the north. The water supply is from nineteen cisterns, five wells, and from the river by means of water wagons. The post is furnished with a six-horse power steam fire engine, which is used in case of fire, and also to supply water from the river. Telegraphic communication with the outside world is most complete, the wires running through the post, and in charge of an operator always on duty. For the amusement of the garrison a theatre has been built, which is capable of seating 400 people. For completeness as a military station, Fort Riley has few if any rivals, and it is believed that it will meet every demand that may be required of it, when it becomes, as its geographical position will doubtless make it, the principal cavalry depot of the United States. The troops comprising the present garrison are the Headquarters, Staff, and six companies of the Sixth Cavalry, Brevet Brigadier General Thomas H. Neil, Lieutenant Colonel Sixth Cavalry, commanding the post.

JUNCTION CITY.

2 Miles from Fort Riley. 138 Miles from Kansas City.

Is SITUATED at the west side of Fort Riley Reservation at the junction of the Smoky Hill and Republican rivers, one hundred and thirty-eight miles from the Missouri river. It is the largest city in Western Kansas, and continues to grow with rapidity. With the many streams and tributary valleys, all classes can find application for their different branches of industry. The farmer can find as good land as exists on the continent, supplied with wood, water, coal, and building stone; the mechanic an inexhaustible supply of material with which to mould his ideas into realities; and the manufacturer as good water powers as any in the West.

The growth and improvement of Junction City has been of a substantial character, and the business houses of the place are of a class that would do credit to larger and more metropolitan cities. The city was located in 1859, and incorporated as a city of the second class, and in 1860 her population was estimated at 75. During the lapse of eleven years, the continuous influx of people has settled up the country, creating a demand for markets, and her population now numbers 3,500. The superior class of buildings is probably owing, in a great measure, to the abundance of building material in that locality, chief among which is the white magnesia limestone, and well-known as "Junction City Marble." Of this stone there are extensive quarries throughout Davis county. It is easily procured, and when quarried can be sawed to any size or shape almost as easily as lumber. The color is a light cream, and it becomes hard by exposure to the atmosphere. The State Capitol at Topeka is built of this stone. Added to other public improvements, the Republican and Smoky Hill rivers are here bridged with Howe Truss Bridges. Two commodious school buildings have been erected—one for white children, capable of accommodating 300 scholars, and one of less pretensions for colored children. A third fine building for a graded school is in course of construction, and the city is possessed of six elegant churches, built mostly of stone, and really ornaments to the place. These are Episcopal, Catholic, Methodist Episcopal, Congregational, Baptist, and Presbyterian. The prospects of being ultimately the Railroad Centre of Central Kansas are good, as the Kansas Pacific Railway has surveyed a line up the Republican Valley which will be pushed on toward completion this year, and this is the northern terminus of the Missouri, Kansas & Texas Railway, running southerly through Kansas and destined ultimately to reach the Gulf of Mexico. Junction City is possessed of upwards of thirty stores, two banks, four hotels, three livery stables, two dentists, six physicians, and six lawyers. It has also a neat paper, the *Junction City Union*, ably edited by G. W. Martin, Esq. One establishment particularly worthy of mention is the Panton Mills, owned by Messrs. M. H. Panton & Co., who manufacture an excellent quality of flour. The mill is large and commodious, and has a capacity of two hundred barrels per day, 80-horse power engine, and everything in proportion.

The country in the vicinity of Junction City is somewhat rolling, (owing to the numerous streams in such close proximity,) but is not so abrupt as to prevent cultivation with ease, and produces any product in great abundance and with little labor. The extensive valleys along these streams are as follows: The Valley of the Republican, stretching far to the northward, contains a body of rich land, nearly every acre of which can be cultivated with ease; northwest is the productive Solomon Valley, which contains thousands of acres of fine land; and on the west the Valley of the Smoky Hill has become historic for its vastness and productiveness. There are also smaller valleys whose lands are none the less desirable, all of which are tributary to Junction City, and must throw their products into her market, and the inhabitants of which must depend upon this city for necessary supplies. Notwithstanding these streams there are no swamps or sloughs, but the country is sufficiently dry and rolling for all branches of agriculture.

THE POWYS COLONY.

TWENTY MILES north of Junction City, and about eighteen miles from the line of railway, is located the Powys Welsh Colony, whose doings are naturally of great interest to the new comer. This colony was started under the auspices of the Welsh Land and Emigration Society of America (chartered) two years ago, as a home for the Tory-ridden farmers of Wales especially, but open for all citizens of the Welsh community in the United States. At the outset they suffered some privations, but they struggled manfully through, and the Powys Colony now has the reputation of being second only to the Greeley Colony of Colorado, which started with a much larger capital, and under very favorable auspices. The colony town is Bala, and is situated in Riley county, having as a centre, a population of about 400, and contains one general store, one blacksmith shop, one millinery store, four carpenters and builders, and four masons. The lands occupied by this colony are admirably adapted to either stock-raising or grain-growing. Grass is plentiful, and there is an entire absence of the much-talked-of alkali. Good water is plentiful, and sufficient timber exists on the creeks for shelter for the cattle. So far their bottom lands have produced full crops of corn, and on the high prairie they have grown wheat crops which would be hard to beat in any district. Here the soil is a pure black loam, varying in depth from one to fourteen feet. Their lands are traversed by Timber creek, Madison creek and Wild Cat creek, while the Republican river flows about five miles to the westward, with Deep creek intervening. The prospects of this thriving colony are excellent. This district certainly bids fair to be one of the choice sections along the outskirts of the Kansas Pacific Railway limits, the Government lands having been taken up by industrious and temperate emigrants, who have already done much to develop the local resources. District schools are frequent, and are well attended by pupils. At the last general elections, within six miles of Bala, and at three separate voting precincts, there were one hundred and forty-two votes cast, and, but for the inclemency of the weather, there would have been forty or fifty more. The Powys Colony is not behindhand in religious facilities. They have the Congregational Church of Powys—Rev. Henry Davies, Pastor; the Methodist Episcopal Church—supplied by circuit ministers, under direction of Conference; the United Brethren—Rev. Silver, Presiding Elder, and the "Union Church of Powys," open to all Protestant members. In order to give an idea of the real progress of this colony, it may be well to mention here some of their principal farms: Hon. B. E. Fullington has a handsome farm on Madison creek, well watered, plentifully timbered, and having excellent springs. He has built a fine dwelling house and out-houses, and has a stone fence round a large portion of his land. Mr. George Avery has a fine farm on the same creek, with a good, substantial house. Mr. Humphrey has an excellent farm on the same creek, with about eighty acres corn last crop—timber and water in abundance. Mr. Sargent, a similar farm on same creek; Mr. Baker, ditto. Dr. Lair has a very pretty farm, with about sixty acres of timber, on Timber creek, which flows steadily all the year round. Mr. Coe, a very fair farm, with plenty of timber and building stone, and an abundance of water. Captain Gordon, a nice farm, with good springs and fine building stone. Mr. Lane, a farm of three hundred and sixty acres, well watered, plenty of timber, and good bottom land.

The general store and post-office of Rowland, Davies & Co., who commenced business a year ago, is doing a good and safe trade. The Bala Hotel is kept by Mr. Ellis G. Jones, who is a capital host, and occupies his spare time in the practical setting of Osage hedges and general gardening. The business affairs of the colony are attended to by Mr. J. H. Jenkins, General Agent of the Welsh Land and Emigration Society of America, and located at Bala.

THE WAKEFIELD COLONY.

THE TOWN of Wakefield, the headquarters of the "English Colony," is situated sixteen miles northeast of Junction City, on the west bank of the Republican river. The corporation known as the Kansas Land and Emigration Company, which has had the settlement of this colony under its control, was organized in August, 1869, with the Rev. R. Wake, then of Wilmington, Illinois, as its President. Mr. Wake, who is an Englishman by birth, had for several years been laboring, by correspondence with London newspapers and by pamphlet publications, to induce emigration from the British Islands to the Western States. He had located a flourishing colony in Nebraska in 1866, and had been the means of inducing many hundreds of his fellow-countrymen to make their homes in the West. Convinced that Kansas offered greater inducements to the immigrant than any other of the new States, he sought to turn the tide of immigration in this direction. In the summer of 1869 he visited Kansas, and after traveling through various parts of the State, he selected a tract of land lying between the Republican river and Chapman's creek, and as soon as the Company was incorporated, thirty-two thousand acres were purchased from the Kansas Pacific Railway Company. In addition to this, there were upwards of fifty thousand acres of Government and school lands within the limits of the purchase. A town, to which the name of Wakefield was given, was laid out on a slope over-looking the river, and it promises to become a flourishing place of business, and the centre of an industrious and well-to-do community. It has two general stores, a hotel, meat market, blacksmith shop, etc. A monthly market for the sale of live stock has been established, meeting on the first Wednesday of every month. An agricultural and literary society also hold weekly meetings for the discussion of agricultural topics and matters of general interest. Two churches have been organized—Methodist Episcopal and Congregational—each numbering about forty members. Ground has been selected for the erection of an Episcopal Church on the prairie four miles southeast of Wakefield. This will probably be built early this spring. About two hundred families have joined the colony since its establishment, the majority of them from England, though many have come from various parts of the United

States—principally from New York and Illinois. Several parties here have imported blooded stock, from England and Canada, to cross with and improve the native breeds of horses, cattle and sheep. Wakefield thus bids fair to be a thriving agricultural community. The Company has about fifteen thousand acres yet for sale, which they offer at from five to six dollars per acre. There are also about fifty homesteads yet vacant.

CHAPMAN'S CREEK.

12 Miles from Junction City. 150 Miles from Kansas City.

Is a station, located half a mile west of Chapman's creek, a fine living stream, and a quarter of a mile north of the Smoky Hill river.

Large bodies of land in the neighborhood are held by Eastern capitalists and speculators, making it a most desirable point for stock ranges and cattle grazing, there being, besides, plenty of water and timber. Land is worth from four to ten dollars, unimproved, and ten to twenty dollars for improved farms.

The principal farms here are one of twelve hundred acres, owned by Mr. A. H. Bartlett, and intersected by the Smoky Hill river, and Mr. Chas. McGee's stock farm, four miles east of Chapman's creek. A fine water-power flouring mill, owned by Mr. C. R. Barnes, and situated one mile north of the station, is also doing an extensive business. The population numbers about fifty.

DETROIT.

6 Miles from Chapman's Creek. 156 Miles from Kansas City.

Is THE third town in size in Dickinson, one of the largest and best counties in Kansas. Wm. Lamb, Esq., the first settler, went there in May, 1858, and took a claim which covers most of the present town site. In 1860 a mail and stage station was established, making Detroit an important trading point from that date. In the year 1867, the Kansas Pacific Railway was completed to that town, but emigration being retarded by the war, the town was not actually laid out until 1869; and since then, owing to strife among the owners, has grown but slowly; but the surrounding country has settled up very rapidly, and the farming population supports the reputation of the place for business and activity, ahd as a first-class trading point—there being good stocks of hardware, drugs, stationery and tobacco, and four full stocks of general country supplies, such as groceries, dry goods and boots and shoes. Among the most prominent business men are A. G. McFarren, Esq., Real Estate Agent and Notary Public, and Land Agent for the Missouri, Kansas & Texas Railroad; Messrs. Hurd & Son, formerly of Galva, Illinois; and Messrs. McMahon & Dederick, and C. W. Lamb, Esq., merchants. The vote polled within a ten-mile radius of the place at the last general election aggregated about six hundred—more than double that of the previous year.

Detroit is located one hundred and fifty-six miles west of Kansas City, and ninety miles west of Topeka, (the capital of the State,) in one of the finest stretches of valley land in Kansas. The Smoky Hill river runs within half a mile of the town, and excellent well water can be had at an average depth of twenty-five feet, and old prairie judges say that there is a larger proportion of rich tillable land in a radius of ten miles from Detroit than in any similar vicinity on the road.

The Government sections of land are now pretty well settled up for a distance of some twelve miles from the road, north and south, but the greater part of the Railway lands are still open for settlement, at from four to seven dollars per acre, according to the quality, distance from stations, etc. There is quite a large settlement from Central Illinois to the north and northwest of Detroit, and a German settlement on the south side of the Smoky Hill river. One and a half miles south of Detroit are the celebrated Flouring Mills of C. Hoffman, who ships from that town. Mr. Hoffman, who now represents Dickenson county in the Legislature, commenced there as a poor homesteader about seven years ago. His mills are looked upon as unequalled in Western Kansas, drawing custom and patronage from half a dozen counties and a radius of one hundred miles, besides the merchant or export trade, which amounts to several car-loads per week. The mills are at present running on Government contracts. Close to this mill property, and in sight of Detroit, is the famous Warner Stock Ranche, containing some fifteen hundred acres, under fence, and as much more unimproved, capable of carrying thousands of cattle. Detroit has a fine school-house and a well kept school, and being the commercial centre of so large a scope of rapidly settling country, cannot but have a good future in store for it. It must become an important point, and property values, from causes already stated, not being inflated by speculation, this place offers peculiar inducements to capitalists wishing to invest "on the ground floor."

ABILENE.

6 Miles from Detroit. 169 Miles from Kansas City.

Is the county seat of Dickinson county, Kansas, and has a population of about twelve hundred. It is celebrated as being hitherto the great shipping point for Texas cattle to the East and West, and is surrounded by some of the best agricultural country in the State. The adjoining country is, in fact, far ahead of the town. All kinds of trade and traffic are required to meet the present business demands, and for a business man or one desiring to establish a home, but few better points can be found. A fine stone and brick Court-house, and several blocks of brick buildings, for business houses, are erected, and more in course of construction. The site for a seminary (to cost from twenty to thirty thousand dollars) has been purchased, and the work will be commenced this spring. The soil of this district is very rich and fertile, producing beautiful flower and vegetable gardens, fine farms and thrifty trees and shrubbery, and at the great Kansas City Exposition of 1871, the cereals, trees and vegetables exhibited there, and grown at Abilene, received especial commendations from the visitors and the press generally. Trees especially seem to thrive in a wonderful manner. For instance—a peach tree grown by Mr. Barber, of that town, from the pit, in six months time measured six feet high and three inches in circumference. This was not an exceptional instance, being only a little above the average of some sixteen hundred trees planted by the above named gentleman. A six months' growth from the bud was also measured—the root having been one year old when budded—the height attained was ten feet, and circumference (one inch above where budded) five and a half inches; as large a growth as usually reached by two-year-old trees in Eastern States. Hedge plants also show an extraordinarily rapid growth.

A fine iron bridge spans the creek west of the town, and another the Smoky Hill river two miles south of it, thus making the place accessible from all points, and giving it every facility as a great trading center. Abilene now contains six hotels and saloons, three dry goods stores, three drug, four grocery, two clothing, one jewelry, three boot and shoe, two hardware, one furniture, and one saddlery store; three livery stables, four blacksmith shops, two banks, two lumber yards, one newspaper and printing office—the *Abilene Chronicle*—and two real estate offices. There are two churches erected, and three other denominations will soon build. They are Lutheran, Rev. S. P. Harrington; Baptist, Rev. E. Clarke; Congregational, Rev. W. B. Christopher; Universalist, Rev. U. P. Wilson; Methodist, Rev. Mr. Curtz.

Dickinson county is well watered by the Smoky Hill river, Lyons, Carey, Deer, Turkey, Holland, Buckeye, and Chapman creeks and their tributaries, and the excessive fertility of the surrounding country, and its rapidly increasing agricultural settlement, points towards Abilene having, ere long, a population among the thousands. Added to other advantages may be mentioned the fact that extensive quarries of white magnesian limestone, so justly celebrated for building purposes, and also quarries of gypsum, exist in the vicinity, and very rich salt brine is found at a depth of from sixty to one hundred feet.

In October of last year the locating committee of a large colony of Tennesseans visited this part of the country, and finally chose Turkey creek, south of Abilene, as their location. They number about fifty families, and will be out early in the spring. Mr. Meek, of Knoxville, Tennessee, is their present head.

The Kansas Pacific Railway Company shipped from this station alone 2,025 car-loads, or 40,500 head Texas cattle in 1871, but the rapidly increasing population of this district has compelled the removal of the stock depot westward to Ellsworth.

Speaking in general terms of the country at Abilene and westward to Ellsworth, Col. Elliott, in his "Industrial Resources," says:

"The track at Abilene is 1,057 feet above the level of the sea. In fifty-three miles westward, at Summit Siding, (two and a half miles east of Fort Harker,) the railway track rises to 1,556 feet, or 499 feet higher than at Abilene—an average of nearly ten feet to the mile. This elevation is on a part of the road which cuts off a bend of the Smoky Hill River. At Ellsworth, sixty miles from Abilene, the track is again in the valley of the Smoky, and 1,440 feet above the sea—116 feet less elevation than at Summit Siding, and 383 greater than at Abilene. From Abilene to Black Wolf, ten miles west of Ellsworth, we have a sandy soil on the uplands, nourishing a thick growth of grass, and productive under the plow; in the bottoms a darker loam, containing more clay as a general rule, but having all the elements of permanent fertility. Rocks appear on the bluffs and banks of streams; also in limited areas on the surface of the uplands west of Salina, and in picturesque buttes, ledges and crests between Brookville and Fort Harker.

"The geological age of the country from Abilene to Black Wolf has not been very positively defined by any geologist whom I have read. I take it to be triassic, merging on its western border between Black Wolf and Wilson

Station into 'Cretaceous No. 1,' of your classification, which, in the highlands north of Wilson, and in the bluffs of the Smoky, south, appears to me to be very distinctly overlaid by your 'Cretaceous No. 2.' The decomposition of the triassic rocks, clays, and shales west of Abilene has left a kindly soil for the plow, except in the limited areas where too rocky for arable uses; and in these the native vegetation affords excellent pasturage, and promises well for tree culture in the future. The farmers near Brookville, Harker and Ellsworth, as well as those at some distance north and south, find even the raw soil of the prairie productive the first season. Near where I write, winter wheat gives unusual promise on sod broken for the first time last summer."

THE ILLINOIS PROHIBITION COLONY.

THIS colony is located ten miles north of Abilene, in Dickinson county. The Rev. W. B. Christopher, editor of the *National Prohibitionist* of Chicago, planned this colonial movement on the basis of the prohibition of the use and sale of intoxicating drinks. One year ago he, with Messrs. Penfield and Little, made an examination of different localities, and as a beginning selected a location here. One entire township is now occupied by one of the most promising settlements in the State. A church has been organized upon Union principles, composed of members from various denominations. The township has been organized as a school district, and the erection of school-houses will speedily commence. An Arboricultural Society has also been formed, which meets monthly to discuss at length all matters connected with tree growing, floriculture, etc. The whole township will soon be beautified with hedges and ornamental trees. The Colony has erected about thirty houses already, and broken a large area of land. J. W. Robson is the present President, the founder, W. B. Christopher, being engaged in gathering another colony of large dimensions, having Bunker Hill as its objective point.

THE NATIONAL TEMPERANCE COLONY.

"THIS Colony, under the same management, with its substantial elements and forces, is now gathering in Illinois, Ohio, and other Eastern States. The Kansas Pacific Railway Company has wisely and generously given them very favorable rates, and Russell county is to be their location. This mode of settling the liquor question by pre-occupation is perfectly successful and satisfactory, and it is expected that that fertile district will soon "blossom as the rose" under the common sense and benevolent auspices of the "National Temperance Colony."

TREE PLANTING NEAR ABILENE.

IN ANSWER to some inquiries by the author, regarding tree culture in the vicinity of Abilene, and Dickinson county generally, Dr. J. M. Hodge, of Abilene, writes as follows, under date of January 13th, of this year:

"Through the kindness of Col. Elliott, Industrial Agent of the Kansas Pacific Railway, I was furnished with a quantity of Ailantus and Catalpa seed, which I put up in envelopes and distributed in small lots to all who would agree to plant and care for them. As a result of the distribution there are now several hundred small groves of Ailantus trees doing well in this county.

"I have heard of no instance where the seeds failed to grow. A number of farmers brought specimens of these Ailantus trees to our county Fair last October. Those that were exhibited were from four to five feet in height, with fine bodies. Some of these trees, with some peach trees grown from the seed last season, and some Osage Orange plants of one year's growth, were sent to the Kansas City Exposition, and attracted great attention for their wonderful growth. A great many of our farmers have beautiful groves of walnut, growing and doing well.

"The extraordinary growth of trees from seed, as shown last season, has stimulated our people to engage in tree culture, and there is now an unusual demand for all kinds of seeds. In the fall of 1870 I got from Col. Elliott three barrels of walnuts, and planted two barrels of them myself. The ground selected had been broken in the summer of 1869, and there was nothing further done with it until the fall of 1870. We ploughed several single furrows, about four feet apart, and dropped a walnut about every two feet in the furrows; we then turned a light furrow on them, and last spring they came up beautifully, and made a growth during the summer that was very gratifying. Many of them are two feet high, with substantial bodies. We planted several hundred soft maple for shade trees around some blocks that we wished to improve, and had the satisfaction of not losing a single tree that was planted in ground that had been cultivated. We lost three or four that were planted in sod ground. Besides the walnut and soft maple, we have a few chestnuts that were six to ten inches high when planted last spring; they did not make a rapid growth, but they all lived. Efforts are now being made here to organize societies for planting trees, and we hope to inaugurate a regular system of tree culture in the different townships of the county and have it in good working order for spring planting. Enough has already been done here to demonstrate the fact that almost any kind of tree will grow and do well here. As to fruit tree planting, several thousand dollars' worth were planted here last season, every man who had a few acres broken having put out a few acres of fruit trees, and I expect to see the good work go on until Dickinson county shall become as noted and famous for her fine orchards and groves of timber, as she is now for her magnificent stretches of rich prairie soil, etc."

SOLOMON.

9 Miles from Abilene. 171 Miles from Kansas City.

Is SITUATED near the west line of Dickinson county, and on the north side of the Solomon river, at the confluence of that stream with the Smoky Hill river, 170 miles west of Kansas City. . The town was laid out in 1865 by Col. Chas. Willemsen, of Lawrence, Dr. L. Hall, of Junction City, and Mr. Henry Whitley, who was the original settler and pre-emptor of the land on which the site was laid.

There are upwards of forty houses of business in the place, with a population of about 600, and a voting population of about 200 in the township. The vote of Dickinson county for 1870 was but little over 500, and for 1871 it reached 1,100. The great growth of the town and the county has been during the last two years, and it still continues to increase rapidly and substantially.

The educational facilities here are, as in most parts of the State, in advance of other improvements; hardly a neighborhood but has its school-house, with school in session from six to nine months in the year.

Solomon has four church societies, with two churches complete, and one in process of construction. The Baptist Church Society have a very neat church building, Rev. A. Hitchcock, pastor. This house of worship is also occupied, in part, by the Methodists, with Rev. Mr. Kaler as pastor. The Presbyterians are building a church, which will be completed early this spring. They occupy the school-house for the present, Rev. B. Carry, pastor. The Catholics also have a very comfortable church.

Salt springs exist in abundance in this vicinity, and the manufacture of salt there bids fair to be a most important branch of business. The Continental Salt Company, already established, produced last season about 7,000 bushels of No. 1 salt, on which they realized a handsome profit.

In the surrounding country there is a fine extent of rich bottom lands, the Smoky Hill and Solomon valleys being very wide at this point. Gypsum Creek, Holland Creek, Buckeye Creek, and Coal Creek, all within ten miles of Solomon, form an extent of well-timbered and watered farming lands not surpassed along the line of railway. The above are all living and inexhaustible streams, giving great advantages to both stock raisers and agriculturists. The upland for many miles back is gently rolling, and but little broken by ravines, and in richness of soil and productiveness, but little inferior to the bottom lands. Forest and fruit trees grow very rapidly, and do well, and the prospects of the country round Solomon being an extensive fruit-growing section, are very flattering. Bottom lands within five miles of the railway are held at from seven to ten dollars per acre; uplands, five to ten; in the second five miles from the track, from four to eight dollars, and in the second ten miles, two to five dollars. There are but few improved farms for sale near the town.

From this town starts the Solomon Valley stage and mail, running tri-weekly to Lindsay, Minneapolis, Delphos, Glasgow, Ashville, Beloit, Glen Elder, Waconda, and Cawker City, a distance of eighty miles, through one of the finest valleys in the State, which is rapidly filling with a good class of farmers, affording a large and profitable trade to the town. There are four hotels in Solomon, and extensive stock yards are located there, Texas cattle having been shipped from there in large quantities for several years past. A live newspaper, banking house and flouring mill are, at this writing, much needed there, and would do a brisk business as soon as started. The Kansas Pacific Railway was completed to this point in April, 1867. Mr. O. F. Searl is the agent there for the Kansas Pacific Railway lands, and is always ready to give information concerning Solomon and its surroundings.

SALINA.

13 Miles from Solomon. 185 Miles from Kansas City.

Is THE county seat of Saline county, and is situated on the Divide between the Smoky Hill and Saline rivers, and was first settled in 1858 by Col. Wm. A.

Philips. Owing to the war the progress of Salina was much retarded, and until within the last four years it was little more than a way station on the Santa Fe and Overland Freight and Stage Route, its trade being confined to the few adjacent settlers, Plainsmen, Indians, and Mexicans. In 1866 the town consisted of about fifteen small frame houses, and it was in this year that the first saw-mill was started there for the purpose of turning out material for building, and it may be said that the present town is, in fact, little more than four years old. There is no town on the line of the Kansas Pacific Railway that will give the visitor a better idea of the extraordinarily rapid growth of her towns and increase of property values. Salina has now upwards of 1,500 inhabitants, and possesses four good hotels, a large number of stores, and several churches of various denominations, one of these buildings, the Baptist, being an extremely elegant edifice. She has a fine public school building, which cost about $8,000, one steam flouring mill, and two grist mills. This is also an eating station for the passenger trains on the Kansas Pacific Railway, and passengers will here find as good a spread as there is on the line; canned vegetables and fruits are put on the table all the winter through, and in summer a profusion of seasonable edibles—in fact, the entire *cuisine* is very unlike the generality of railway eating houses.

The surrounding country is well watered and traversed by the Smoky Hill, Solomon, and Saline rivers, and by Elm, Gypsum, and other smaller streams, furnishing the richest of bottom lands, alternated by gently rolling prairie with the most fertile of soils. In these bottoms the cutting of hay for the supply of the cattle dealers farther west, would be a most lucrative enterprise. About ten miles from Salina are extensive quarries of gypsum or sulphate of lime, commonly known as "Plaster of Paris." At Gypsum Creek the bed is massive, being about sixteen feet in thickness; some of it assumes the selenite variety, and other portions contain imperfect imbedded crystals. In the Arts, gypsum is applied to several purposes, particularly in taking casts, in stucco work, and other ornamental designs for buildings. Its especial value is as a fertilizer, and in this respect will be invaluable. Prof. Mudge, writing on this subject, says: "While it is excellent for crops in various ways, its great worth, to the Kansas soil, consists in its hygrometric quality, or virtue as an absorbent and fixer of certain volatile matters, which are useful in plants, and thus counteracting the drying and evaporating effect of the sun and winds. This is an important quality, which our farmers will readily appreciate. It retains the moisture to such a degree that a crop, particularly of roots, manured with it, will flourish when an adjoining field will be dried up. A single bushel of the powder on a quarter of an acre of land will show a decided improvement in the crop."

According to Koller, the action of gypsum depends upon the power possessed by the lime to form with the oxygen and carbon of the atmosphere, compounds which are favorable to vegetation. According to Mayer and Brown it merely improves the physical properties of the soil, while, according to Keil, it is an essential constituent of the plant. Hedwig called gypsum the saliva and gastric juice of the plants. Humboldt, Girtauer, and Albert Thaer consider it a stimulant by which the circulation of plants is promoted; Chaptal ascribes its action to a supposed power of supplying water and carbonic acid to plants. According to Laubender it acts as an exciting power without mixing itself with the sap of the plant. According to Liebig it fixes the ammonia of the atmosphere, and according to Bragounot and Sprengel, it supplies sulphur for the legumi of the leguminous plants. Johnson, the celebrated agricultural chemist, also corroborates this latter view.

The author has treated thus fully on the subject of gypsum, as there is a prevailing ignorance or indifference among farmers and settlers along the line, as to its great importance and use as a fertilizer.

Salina is an incorporated town, and five Trustees, who are elected annually, manage her municipal business. Lands in the vicinity are worth from ten dollars upwards, and there are some splendid farms within a few miles of the town. A great deal of the railway lands there are in the hands of speculators, which makes it a particularly good grazing point; and, as the best of the Government claims have been taken, there are few lands to be had except second-hand.

BAVARIA.

8 Miles from Salina. 193 Miles from Kansas City.

Bavaria, or Hohneck, which is the name of the town site, is located in the beautiful valley of Spring Creek, and is the center of the flourishing Ohio Colony, the members of which emigrated in April, 1869, from the different counties in the "Western Reserve," and who have dotted the whole surrounding country with neat farm houses and other farming improvements. This settlement is particularly interesting from the fact that, even after the Kansas Pacific Railway had reached there, in July, 1867, it was considered a part of the "American Desert," and useless for farming purposes. Mr.

Hohneck, who settled there first in 1854, and Mr. Evander Light, who settled two miles east of there in 1866, were extensively laughed at for their foolish enterprise in trying to start a farm where "nothing could grow;" and when, finally, the Ohio Colony arrived, and its members were foolhardy enough to take claims on the uplands, still covered with buffalo grass, every one said "Fools!" Subsequent events have caused these croakers to change their tune, and the settlers now proudly point to their well filled granaries, and stock yards, proving the "fools" to have been on the other side. Railway lands, which in the spring of '69 were held at $3 per acre, with no buyers, are now all bought up, and will command from $10 to $15 per acre. Every quarter-section of Government land for miles round is occupied by actual settlers. Immediately south of the Divide between Spring and Elm creeks, a flourishing Swede settlement was established about two years ago, and there are now from four to eight families residing upon every Government section. North of the station an unbroken line of settlements extends across the point of the Divide between Spring and Mulberry creeks, across the Mulberry valley, up the southern slope, and across the Divide between it and the Saline river into the valley of the latter river. A number of large farms have been opened in the district tributary to Bavaria, the principal of which are, Mr. Light's, of 500 acres cultivated; Brunswick's farm, with 250 acres cultivated; Mr. Hohneck's, 125 acres; Mr. Wilson's, 100 acres, and many others with over fifty acres improved. Winter wheat is one of the main crops at this point, always certain, and hard to beat for quality or quantity. Bavaria has a fine two-story school-house, erected at a cost of over $2,000; one store, one blacksmith shop, and depot buildings. There is a fine opening for a grist mill and another general store. The erection of a butter and cheese factory at no distant period is contemplated. The population of the township is about 800.

The human foot-prints, which caused considerable discussion at the time, were found south of Bavaria, in the ferruginous sandstone of the country. The stones containing them were for a time in the possession of Dr. Webb, of Topeka, and are now in some Eastern collection. Numerous impressions of leaves of a large variety of trees have also been found there, showing that the country was at one time heavily timbered.

BROOKVILLE.

6 Miles from Bavaria. **200 Miles from Kansas City.**

Is THE terminal point of the Kaw Valley Division of the Kansas Pacific

Railway, and a very promising place. The town was laid out in 1870, and since then has grown slowly, but surely. The railway buildings there consist of a station house, telegraph office, hotel, fifty by twenty-five feet, with laundry attached, section house, car repairing shops, coal platform, and a fine stone water-tank, with wind-mill. These were built at a cost of about $24,000. The finest stock yards west of Kansas City were built at Brookville last year, but it seems that they will not be extensively used, the rapidly increasing settlements having caused the main shipping points of Texas cattle to be moved to Ellsworth and New Abilene. The town takes its name from a brook or fine spring creek, which flows along the south line. On the south of Brookville, stretching east for two miles, is a remarkably fine strip of bottom land, traversed by Rock Spring Creek, which would be a splendid spot for the establishment of nurseries to supply the western country with trees, etc. There are two large grocery and provision stores in the town, one dry goods, one drug, 'one agricultural implement establishment, lumber yard, and the usual complement of saloons and smaller stores. The population numbers about 400. There is also an excellent school-house, free to all denominations.

The surrounding country is rolling prairie, with good bottom lands on the Saline River and Mulberry Creek on the north, and on Rock Spring Creek and the Smoky Hill on the south. The most extensive stock farmers in the neighborhood are Messrs. Powers and Hutchinson, and Col. Gile, late of the United States Army, who own extensive ranches and corrals, branding shutes, etc.

A nine inch vein of coal has been discovered one and a half miles north of the town, but too recently to give any particulars.

There were 250 votes polled in the district at the last general election.

FORT HARKER.

17 Miles from Brookville. 218 Miles from Kansas City.

THIS MILITARY post was located in 1866, and built in 1867–8, by Major H. Juman, and was for a long time the shipping point of freight for New Mexico. The place, in its early days, suffered from cholera and Indian troubles, and settlements were much retarded; but during the last two years the country in the vicinity of the military reservation has gradually filled up, principally with stock-raisers.

The Fort is prettily situated on a rising ground, close to the line of railway, and two and a half miles north of the Smoky Hill river, and on a fine day presents a remarkably pleasing and picturesque sight.

ELLSWORTH.

4 Miles from Fort Harker. **223 Miles from Kansas City.**

THE TOWN of Ellsworth is situated on the north bend of the Smoky Hill river, and is about the southernmost point of the line of the Kansas Pacific Railway, and the nearest to the Arkansas river. It is the county seat of Ellsworth county.

This town was laid out and settled in the spring of 1867, and at the outset experienced many drawbacks; one of the most serious of which was a heavy flood, which washed away almost everything belonging to the pioneers. The site was then moved from the originally intended site to higher ground—its present situation. During the summer fresh troubles were added in the shape of encroachments by the Indians, and to cap the climax of misfortune, cholera visited the place and carried off one hundred and ten of the inhabitants. With that courage and hardihood, however, which characterizes the Western pioneer, they struggled through their difficulties, and Ellsworth is now a thriving town of eight hundred souls. From the proximity of the place to Fort Harker, and the fact of its being the point from which were shipped Mexican freights and supplies for Forts Sill, Larned, Dodge, and Camp Supply, it became a resort, at the outset, for roughs and gamblers; but the citizens organized a vigilance committee, and soon rid themselves of this pestilential population, and affairs are now conducted in as peaceful and orderly a manner as any Eastern town. A good class of families are living there, who, with the help of a fine agricultural and stock raising country round them, will soon raise themselves to a first class standard among people. The country in the vicinity is well watered by the Smoky Hill river and numerous fine creeks tributary to it, and for stock grazing, it cannot be surpassed. The cattle shipping trade is gradually advancing westward, owing to the large influx of agriculturists to the grazing lands, and Ellsworth will be one of the principal shipping points for this year. Some forty thousand head were wintered there during the past season. There are numerous farmers and stock raisers in the country adjoining the town, the most prominent of which are D. B. Long, E. Green, J. C. Howard, A. Larken, J. Ferris, J. S. Merryman, and Dr. Steinberg. The town is possessed of a good school, and is well supplied with stores, livery stables, a good hotel, and every facility for doing a thriving trade. In the spring of 1871, a colony called the "Union Emigration Society" settled in Rice county, south of Ellsworth, and organized that county in the fall. Some members of this colony, however, settled in Lincoln county. All of them have done well, and raised a fair crop of sod corn the first year. They have not as yet located a colony town, but will do so soon, and will probably locate it somewhere near the crossing of Cow creek. The officers are—A. S. Combs, Esq., President; E. C. Jones, Esq., Secretary, and F. G. Griffith, Esq., Treasurer. Mr. Griffith is elected Representative to the State Legislature from Rice county for 1872, and it is thought he will make a most efficient member.

A hotel, which cost ten thousand dollars, and having accommodations for five hundred guests, has been erected here this year for the convenience of the cattle men. It is owned by Major M. B. George, an extensive and well-known Texas cattle drover, and is called the "Drover's Cottage." Ellsworth is this year, what Abilene has been in the past—the largest cattle market west of the Missouri river. The yards erected by the Railway Company within a mile of the station, have facilities for loading and forwarding from one hundred car-loads and upwards of cattle per diem, and are under charge of Col. R. D. Hunter, of Missouri, who has been for many years largely interested in the Texas cattle trade.

WILSON.

17 Miles from Ellsworth. 239 Miles from Kansas City.

THE YOUNG town of Wilson, which, at this writing, contains some eighteen houses and stores, with others rapidly going up, is generally looked upon as one of the finest points on the line for agriculture and stock raising, its chief attractions being abundance of water in the clear cold springs, its rich soil and proximity to the river, and inexhaustible supplies of coal; but all the inducements and facilities of this favorite location are so fully ventilated in the extract from the Kansas City *Journal of Commerce*, and other articles, given in the ensuing pages, that it were useless to dilate upon them here. Suffice it to say, that it is the favorite stopping-off place for visitors and intending settlers in Russell and Ellsworth counties, and that settlers are crowding in and settling round there with a rapidity that is simply marvelous. The Railway Company's Station Agent there, Mr. Tyler, is a courteous gentleman, and always ready and willing to give information to strangers, and the visitor will find a good boarding house, kept by Mr. Philip Gabel, where he can procure a first class meal and a good bed. There are two general stores, postoffice, livery stable, saloon and restaurant.

Here also may be found Mr. Ernest Honek, the agent for the sale of the Railway Company's lands in Russell, Ellsworth and Ellis counties.

"Mr. F. D. Curtis, Vice-President of the New York Agricultural Association, and agricultural editor of the New York *Republican*, visited Wilson last summer, and the following is clipped from a report of the proceedings of the American Institute Farmers' Club, which were held subsequent to his return:

Mr. Curtis—"I have said that I believe Kansas is the coming State."

Mr. Ely—"Do you own any land there?"

Mr. Curtis—"Don't ask me any questions. But I will quote the language of St. Paul, who remarked that 'faith without works is dead.' The facts are, that a man with proper notions of life, and with a disposition to be industrious and frugal, can better himself by going west. He can go to Ellsworth county, about 238 miles west of Kansas City, and buy a farm from the Kansas Pacific Railway Company for $5 per acre, or for $3 per acre in Russell county, just beyond, locate himself on a farm anywhere within twenty miles of the railway, with six years to pay for it, in annual payments of one-fifth at a time. I consider the climate there as good as anywhere in our whole country. It is a buffalo region, and covered with a rich carpet of this luxuriant grass, and well adapted to grazing and butter and cheese-making, as there is already established there, near Wilson's Creek Station, a dairy of thirty-two cows, where this branch of industry is a success. At this point I saw, recently, the largest growth of trees from the seed I ever saw, and so said Mr. Douglas, of Waukegan, Illinois, an experienced nurseryman. Land can be secured under the Homestead Act, with an expense of only $14.00 and five year's occupation, to the amount of eighty acres, within the limits of the railway grant, for any citizen, and one hundred and sixty acres for soldiers. While it is true that the thermometer rises high in this section, there is always a breeze, and one does not feel the heat as much as in New York—at least, such was my experience during one of the hottest days of the season. Kansas is modelled after Massachusetts, and contains a superior class of people, who are determined to lift their's to the top notch among States."

THE GREAT GRAZING REGION OF THE WEST.

FEW persons, outside the stock fraternity, have any idea as to what large proportions the grazing interest of the central portion of Western Kansas, contiguous to the line of the Kansas Pacific Railway, has been developed within the last year. As figures in such cases tell more than many pages of argument, we append the following partial list of the amount of cattle held in the Russell county district, about the first of December last; which list, however, falls short nearly twenty thousand head of the actual number, it being very difficult to get the numbers of herds and owners' names in the outskirts of the grazing grounds:

Names of Owners.	Head of Cattle.
Amerine, —	400
Bigger, —	1,000
Cole, Thos.	1,480
Anderson, Geo.	900
Shaffer, Chas.	1,400
Goff, F. C.	400
Faucett, Means & Nichols,	1,500
Dodge, John	600
Keppel, J.	600
Anderson, —	1,100
Naylor & Clarkson,	1,400
Powers & Co.,	1,500
Wright, G. S.	1,500
Larkins & Hofman,	900
Lang, —	700
Stevens, Jas.	1,400
Chapman & Reid,	1,800
Beebe Bros.,	1,600
Rush, —	2,200
Busick, —	1,280
Evans, Capt.	800
Connell & Ryan,	1,000
Smith, Major	700
King, Capt.	6,000
Cox, —	600
Drisol, —	3,000
Day, Joseph	700
Jamieson, —	3,500
Addington & Co.,	1,200
Johnson, —	1,000
Harris, Col.	1,700
Name Unknown	1,100
" "	700
" "	1,000
" "	1,400
" "	1,500
Nutt, —	1,100
Mercer, —	1,000
Pierson, —	1,400
Lovel, Henry	700
Name Unknown	1,400
Atkinson, & Co.	500
Gregg, —	1,000
Heybrey, —	1,500
On Big Creek,	2,000
Houston, —	600
TOTAL	60,760

Making a total of over sixty thousand head, most of them within twenty miles of the Railway, on the Smoky Hill and Saline rivers and their tributaries, west of Ellsworth and east of Ellis county—the balance mostly on the south fork of the Solomon river. Taking everything into consideration, the cattle did remarkably well during the winter, and proved this to be the best grazing region in the West. In the first place, winter—one unsurpassed in its frigidity, severity, and duration since the settlement of the State—found nearly everybody unprepared for it; from various causes a greater breadth of prairie was burned over last fall than in any previous year, destroying not only the grazing grounds, but also a large portion of the hay that had been cut for winter use—thus entailing on the drovers the necessity of driving to new grounds with cattle which badly needed rest. A great many cattle were also held until very late in the season, near the shipping points, on poor, fed-out pasture, and then driven across extensive burns to the Russell county region, some arriving just before, and others during, the first severe storm of the season. Cattle which came in from the neighborhood of Newton, on the Atchison road, fared worse than any others, they having been half-starved on the poor ranges there.

Other herds were badly managed, owing to the inexperience of their owners. Experienced stock men, who reached this region early, and got their stock rested and in "good heart" before the severe weather set in, hardly suffered any losses whatever. This fact is owing to the splendid variety of grasses indigenous to this region, consisting of the buffalo grass, or Texas curled mesquit; the straight mesquit; the gramma; several varieties of bunch grasses—equally good for grazing and for hay; the blue-joint—the hay grass of Eastern Kansas; and the blue-stem (also called twine, wire, or Kansas blue grass), the most valuable of all our grasses, making, if cut early in the season, the finest of hay and good pasture summer and winter. One peculiarity of this grass is that the seed stems, which ripen in the latter part of June, assume the green color and juiciness of spring again, as soon as the fall rains set in, offering a splendid pasture to stock when the tall grasses of the more eastern counties are dead and valueless for grazing.

Water privileges along the Smoky Hill and Saline rivers are excellent, both rivers having sandy beds, and pure, transparent water. In the book entitled "Industrial Resources of Western Kansas and Eastern Colorado," Col. R. S. Elliott says:

"Up to the limit of present settlements, water is as abundant and accessible as it is in Iowa or Missouri. It is established that in all of Kansas, near the thirty-ninth parallel, and east of 98° 30′ west longitude, there is no part where settlements are impracticable, or need be retarded on account of the scarcity of water. In addition to the Republican, Smoky Hill, Saline, Solomon, and other constant streams, there are innumerable arroyos and courses, in which water for stock is found in constant pools, or near which abundance can be had in shallow wells. It is also a pleasant fact, that in the uplands the general rule is that water is accessible in all directions, in wells of moderate depth, usually sunk without resort to blasting, and unfailing in their supplies.

"At Wilson Station, about 98° 30′ west longitude, water immediately at the railway track is abundant, within forty-eight feet of the surface. South of the station three miles is the living current of the Smoky Hill river; a few miles north is the Saline, and then the Solomon—all having tributaries of greater or less volume and permanence. At Ellsworth the railway makes its greatest southern bend, opposite the northern bend of the Arkansas, which is within fifty miles, and the streams flowing into the Arkansas in that region are already flanked by the homes of pioneers, whose numbers are rapidly increasing. The magnificent pasturage of that part of Kansas makes it the paradise of the stock raiser.

"The numerous springs near Wilson—some of considerable volume, and all yielding water of much excellence—would be worthy of note in any part of the Union, but could not be more happily placed for usefulness.

"West from Wilson the railway courses parallel with, and not distant from, the Smoky, until approaching Hays, when it bears up the valley of Big Creek, an affluent of the Smoky. North Fork and Fossil Creeks are crossed between Wilson and Hays. Big Creek is crossed at Hays, and again at Ellis. On the "divide" between the Smoky and Saline, followed by the railway from Wilson to Hays, water is found at depths corresponding to the undulations of the track and its elevation above the Smoky, and a short distance either north or south of the railway is available in springs, streams, and pools. Along the more elevated portions of the line, where deeper wells are required, the dense clays of the cretaceous series are at hand for cisterns and tanks to hold rain-water, and the thinner layers of the fossiliferous limestone afford easily wrought materials of construction.

"Thus we reach Ellis, 302 miles, and have been all along in a country sufficiently, if not abundantly watered, and presenting, where they may be required, ample resources for the establishment of ponds, cisterns and tanks, to retain the supplies which the clouds do not fail to yield. We are nearly half way from the State Line to Denver, and 2,019 feet above the level of the sea; yet neither in the paucity of vegetation, nor in privation of water, nor in sterility of soil, have we found one feature of the traditional desert, with the single exception of the scarcity of trees, which are only found along the water-courses, or in nooks of the bluffs where fires have not been able to reach them."

The broken nature of the country all along the above streams affords the best of shelter for cattle, and building material for the owners' dwellings, consisting of the soft white limestone which is easily worked, and which afterwards hardens by exposure to the air. Added to the above mentioned facilities of this region, as being pre-eminently adapted for stock, is the close proximity of the railway, by which supplies of all sorts can be obtained cheaply and quickly. These facts are evidently understood and appreciated by numerous parties, who during the summer of last year established ranches here, and are going into stock raising permanently. Men well posted on cattle subjects think that this is to be the stock country of the future.

This year sheep will be extensively tried, and no doubt with good success if decently cared for.

In August, 1871, a gentleman from Australia, and who owned a run of forty thousand sheep there, visited Russell county, and gave it as his opinion that the high prairie slopes, covered with the short curly buffalo grass, and with the Smoky Hill river flowing at their base, were pre-eminently adapted for sheep. Other sheep farmers of less pretensions, from the Eastern States, have expressed the same opinion. The matter of caring for stock, putting up hay and sheds for shelter during the winter, is being extensively mooted in more southern latitudes than ours—latitudes which have hitherto been considered the El Dorado of the stock raiser and driver. The following extract from a Texas paper of last fall tells its own story, and is abundantly confirmed by others of a like character:

"The cattle in Texas will die by thousands in consequence of the severe winter. It is computed, says the *State Journal*, that the West Texas cattle interest has lost in stock, from the present cold snap, over $400,000 worth. By-and-by our stock raisers will comprehend that it is cheaper, as well as wiser, to provide some shelter and food for cattle during the winter northers, rather than to permit decimation by cold, starvation and exposure."

The country where stock will uniformly thrive and do well, *without any care whatever*, has not yet been discovered; and this point being settled, it becomes an established fact, that better cattle can be raised, and at cheaper rates, along the line of the Kansas Pacific Railway than in any other part of the Union. The total number of Texas cattle wintered along the line of the Kansas Pacific, during last winter, was one hundred and fourteen thousand head.

The season for 1872 has opened most auspiciously, and on the 3d and 4th of June, the following parties arrived in Ellsworth with Texas cattle: J. T. Bennett, 6,000; Col. Meyers, 2,000; Ellison & Dewes, 2,000; Dr. Coppage, 2,500; Jesse McCutcheon, 2,000; J. M. McCutcheon, 1,500; Wethers & Montgomery, 4,000; Bailey Walker, 2,000; Capt. Evans, 2,000; Capt. Littlefield, 3,200; J. Cockrill, 2,800; H. B. Shiner, 3,000. These, with some cattle that arrived a week previous from the Indian Territory, making a total of 45,000 head, arrived up to date of June 4th. Advices from Southern Kansas of same date state that, owing to the extreme wetness of the season, the mosquitoes there are, to use a Texan's words for it, "bigger'n a inch," and it will be impossible to hold cattle there.

BUNKER HILL.

13 Miles from Wilson. 253 Miles from Kansas City.

Is NEARLY the geographical centre of Russell county, and was located in the spring of 1871. Several substantial dwellings have been erected, one of them a fine stone edifice, and the general appearance of this new settlement indicates energy and enterprise. Building stone of the finest quality is obtained here, and two miles south of the town a good vein of coal has been opened. A large colony is now organizing in the East, having this place as its objective point.

FOSSIL.

9 Miles from Bunker Hill. 262 Miles from Kansas City.

THE LOCATION of this town is one of the few instances on the Kansas Pacific Railway of descending grade going westward, it being thirty-two feet lower than Walker's, twelve miles west. Up to the spring of 1871, a station and water tank were all the buildings that existed where this thriving young town now stands. A "dug-out" still remains where the brave Dutchman lived who tended the tank, and in which he defended himself and family, and the section men who survived the assault on one afternoon in May, 1869, from a band of Indians. The graves of two of the men who were killed by the red-skins may be seen on Main street; a small stone marks the spot, with the inscription: "John Lynch, of New York, and Alex. McKeever, of Canada—Killed by Indians May 28th, 1869." The first settlement of Fossil—or Russell, as the postoffice is called—was made by the Northwestern Colony in April, 1871, and at this writing (nine months thereafter,) it has a population of 300. The growth has not been so rapid as that of other new towns, but it has been a healthy growth, and its business now exceeds the expectations of any one at the outset. The indications of a rapid and large increase in population during this year are very flattering. The progress of some of the pioneer business men of the place may here prove interesting:

H. W. Tusten, one of the sixty who first arrived on the spot, brought with him a small stock of groceries, and opened the first store in the colony in a small frame building thirteen by twenty feet. In the end of May he moved into a new and larger building, and since then, increasing trade has compelled him to build two additions, and his trade during the last few months has averaged upwards of $1,000 per week.

Mr. Hart opened the second store, and from a few hundred dollars' worth of groceries, in a building twelve by eighteen feet, has increased to a large stock of nearly all varieties of goods needed in a new country, and is now in a building several times larger than the one in which he started.

Mr. H. Wentworth started a small tin-shop about the end of June, soon adding a stock of stoves and hardware. He has taken Mr. Compton, from Pennsylvania, as a partner, and is now doing a flourishing business.

"Mr. Goldsoll, of St. Louis, has been recently attracted to this place, and has opened a stock of clothing and a general outfitting stock for the cattle men. C. M. Lewis has a drug, paint and oil store, and W. C. Hobbs and H. Teuft, boot and shoe stores—all doing a lively trade. There are two lumber yards—each doing an extensive business, and both having branch yards on the Solomon river. Mr. Pratt, the President of the Colony, is agent for the sale of the Kansas Pacific lands in the vicinity, is a notary public, and is doing a general real estate and insurance business. Mr. S. Mann has opened a good hotel, the "Russell House," and though at present rather cramped for room, his guests always find a well spread table and comfortable sleeping accommodations. Capt. Brown runs a first-class bakery, Chas. Wolcott a livery stable, and N. Gernon, a blacksmith shop. Much of the business success of this town is due to Mr. T. F. Oakes, the General Freight Agent of the Kansas Pacific

Railway, who, with well-timed liberality, made such favorable rates for the transportation of freight to this colony, that the merchants were enabled to sell at such prices as defied competition, and drew trade.

"Outcroppings of coal have been discovered close to Fossil, and it is now used as fuel for the town. The Northwestern Colony was organized at Ripon, Wisconsin, January 17th, 1871, principally made up of members from Ripon, Fond du Lac, Oshkosh, and other towns in that State. The location of this colony was at first looked upon as a hazardous enterprise; on the day of their arrival—April 19th, 1871—a furious gale was raging, and as no accommodations were at hand, the conductor of the train switched off a passenger and baggage car as a temporary dwelling place for these plucky pioneers. On the second day the gale abated, and timber, which had been previously ordered, having arrived, the village of Fossil was commenced, and they were soon in comfortable quarters. The above is a fair sample of what may be accomplished by perseverance and pluck, even on the traditional "Great American Desert."

RUSSELL COUNTY.

THE MOST accurate description, perhaps, which can be given of Russell county, (which is the latest county in which lands have been put in the market for sale by the Railway Company,) is the following from the Kansas City *Journal of Commerce*, whose special correspondent made a personal tour of that part of the country "for the purpose of ascertaining its resources and satisfying the demand of the public for correct information concerning it":

"Much interest is now being manifested, not only in the Eastern States, but also in Canada, England and Germany, on the subject of Kansas Pacific Railway lands and emigration thereto. The great number of people who have emigrated to this country during the last three years, and the almost total absence of dissatisfaction among them, is being the means of bringing large numbers to this State, and during the coming spring it is estimated that the immigration will far exceed any preceding year. The office of Messrs. Harris, Abrams & Co., the Company's General Land Agents at Lawrence, is flooded with letters from intending comers, asking information and expressing their intention of coming in the spring. As many as ten committees for the location of large colonies from Ohio, Wisconsin, Philadelphia and Tennessee, have visited Russell county this fall, and gone back with the full intention of bringing out their people in February and March next. They all see the advantage of coming to a district where every man, however poor, can have and maintain his own vine and fig tree, where he can rear his family in independence and plenty, if not in affluence, and where all can enjoy those most inestimable of God's blessings—good health, pure air, and a strong constitution. Nearly all the lands in proximity to the track have been taken up and settled as far west as Ellsworth, two hundred and twenty-three miles from the State line of Kansas and Missouri, and land in Dickinson and Saline counties, which was put in the market a little over two years ago at three dollars per acre, is now selling at from eight to ten dollars. Such has been the enormous rise in values on this road, and such it has every prospect of continuing to be. Early last spring Judge Devereux, the Land Commissioner of the Company, had appraised and put into the market Russell county (considered one of the most fertile in the Company's possessions) at from two to four dollars per acre, viz: High rolling prairie, good for grazing, two to two dollars and fifty cents; gently rolling prairie, with fine soil and water, three dollars; river bottom land, with rich soil and a fair supply of timber, three dollars and fifty cents to four dollars per acre. At that time there was not a settler in the county. There are now four colonies settled there, besides numerous individual farmers, stock-breeders and dairy farmers; and three towns have been started, Fossil Creek, Bunker Hill, and Wilson, just outside the east line of Russell county.

"At Wilson's the Company reserved the section on which the station stands, and their Industrial Agent, R. S. Elliott, Esq., had twenty acres broken for a sort of experimental farm. On this ground are raised cereals of every description—sorghum, vegetables, fruit and forest trees, Hungarian grass, peanuts, and all with the greatest success. In fact, Mr. Weston, the Land Agent of the Company at Kansas City, exhibited specimens of these productions at the St. Louis fair and the Kansas City Exposition, and the display received great ecomiums from the press generally; and much astonishment was expressed by the visitors, who were impressed with that very general but absurdly erroneous idea, that that country will produce nothing. Some of the sod corn grown there was acknowledged to be as good, if not better than some grown on old ground in the Missouri Bottom; while sorghum fifteen feet high, heads of wheat well filled with a plump white grain, and seedling trees four feet high, were a final blow to the existence of that foolish notion about an "American Desert." The trees which were successfully raised at that point were ailanthus, ash, catalpa, box, elder, chestnut, white elm, black locust, honey locust, larch, maple, oak, Osage orange, pecan, peach, Morello cherry, cottonwood, linden, poplar, willow, walnut, tulip tree, apple, and Concord grape. Mr. Douglass, an experienced and well-known nurseryman from Waukegan, Ills., visited him and said they were the largest growth of trees from the seed he ever saw. The townships adjoining Wilson's Station abound with springs, and three-quarters of a mile south of it, there is one that gushes out of the side of a ravine with a volume of water as big as a man's waist; it is ice-cold all through the summer, and as clear as crystal. The land is owned by the chief post-office inspector of Canada, and is very valuable. South of it one-half a mile are several smaller springs, on a piece of land purchased by Mr. F. D. Curtis, agricultural editor of the New York *Republican*, and Vice-President of the New York Agricultural Association. This gentleman came out here with the Eastern editorial excursion, this summer, and was so pleased with the country that he bought three hundred and twenty acres there for a stock farm, where it is his intention to breed Alderneys, Devons and Short-horns, Leicester, Cotswold and Southdown sheep, and Chester and Berkshire hogs. On the Smoky Hill river, two miles south of the station, is a cedar bluff two hundred feet high, which is full of a very fair quality of coal; but as no capital has yet been employed to mine it, it is yet undeveloped. This land has been reserved by the Railway Company for the coal. Three miles southwest of the station is a ravine, about sixty feet deep, which runs up the line between a Government and railway section, and on each side a three-foot vein of coal crops out. That on the Government section was pre-empted and afterward mined by the old Ellsworth Coal Mining Company. They contracted to get out a large quantity for the Railway Company, and did so, but it was carelessly mined and left out in the rain, and exposed to the bad weather—it being a very wet season—and the consequence was it was spoiled, and the Company refused to use it. This, of course, burst up the Mining Company, but it is the opinion of good judges that with careful mining and a little capital a very fair quality of coal may be got out there.

"The out-crop on the opposite side of the ravine, which has never been mined, is owned by a private gentleman, and he is willing to make the most liberal arrangements with any one who has a little capital to mine it. About four men and a couple of teams are all that is needed. The estimated cost of laying the coal down on the track is thirteen cents per bushel. There is a large local demand from Ellsworth and the neighboring localities, as well as by the Railway Company, who would be glad to purchase good coal at that point. Small quantities have been got out of a mine by a single workman, two miles south of the station, which finds ready sale at Ellsworth, seventeen miles east, at twenty-seven cents per bushel. This is owned by Mr. Matthews, who has a dairy farm at that point. Mr. David B. Waterman, a clever lawyer and genial gentleman, has a fine farm on the bank of the river near the mine, and is always glad to give information to visitors to that locality. In the township adjoining Wilson's Station some four thousand acres are owned by an English gentleman, who came out and purchased on the advice of a friend in the Land Department of the Company.

“At Bunker Hill, fourteen miles west of Wilson's Station, a colony has settled and a thriving village is being rapidly built up. Fourteen miles still further west is Fossil Creek, a village of seventeen houses, station, telegraph office, etc. Most of the land in the vicinity of these places is bought, and next spring will be put under cultivation. This county is peculiarily adapted for colony purposes. The Railway traverses the center of it, with two rivers, the Smoky Hill and Saline, flowing parallel with the track at a distance of from two to six miles; and the belt of land enclosed by these two rivers is extremely fertile and well adapted to agriculture or stock-raising, and a great many stock breeders have already purchased ranches there. The northern part of Russell county is watered by Paradise and Wolf creeks, and here may be found abundance of game—elk, antelope, buffalo, prairie and sage hens, quail, wild turkeys, etc. The Government sections are open for homesteads and pre-emption, and the Railway lands are for sale on five years' credit—one-fifth down at time of purchase, and no more for two years, except a payment of six per cent. interest at the end of the first year. For instance, a man buys a quarter section of gently rolling prairie, with fine soil, at three dollars per acre; on January 1st, 1872, he pays down ninety-six dollars.

	Principal.	Interest.	Amount.
January 1st, 1873	——	$23 04	$23 04
January 1st, 1874	$96 00	23 04	119 04
January 1st, 1875	96 00	17 28	113 28
January 1st, 1876	96 00	11 52	107 52
January 1st, 1877	96 00	5 76	101 76

The arrangements for transportation of passengers and freight are equally liberal. To immigrants giving sufficient evidence of their intention to settle on the Company's lands, tickets are sold at one-third off the regular rates; for purchasers, land tickets are provided, which entitle the holder, on his buying one hundred and sixty acres or more, to have half the fare placed to his credit on the first payment. Freight is also carried for colonists at special low rates. Such is a brief outline of the inducements offered to settlers in Russell county. To the capitalist, the chances are obvious. He can buy say four sections or two thousand five hundred and sixty acres of good land for a first payment of one thousand five hundred and thirty-six dollars, hold it two years, and if judiciously selected, sell it for at least five dollars per acre, realizing three thousand and seventy-two dollars on his outlay of one thousand five hundred and thirty-six dollars, or he can send people on to cultivate it, and thereby double its value yearly. Such chances, however, will not be of long duration, as the country is filling up rapidly.

COAL ON THE KANSAS PACIFIC RAILWAY.

AT THIS writing—January, 1872—it appears extremely probable that the coal spoken of in the foregoing extract will be ere long extensively mined for domestic uses, and it will be a matter of the highest importance thus to be able to obtain coal so near the centre of the line of railway, and more particularly to the settlers and land owners in the vicinity, on account of the increased value it will give their property, as well as the additional advantage of residing in a section of country affording such cheap fuel. The following report of Prof. Wilber, an eminent and well known Mining Engineer and Geologist, may be of interest in the premises. It was written some two years ago, but is no less interesting and correct:

NOTES ON THE SMOKY HILL COAL FIELDS.

BY PROF. WILBER.

THE POSITION of all rock formations making their outcrop on the Kansas Pacific Railway, resembles the overlap of shingles on a roof—the lower edge of the roof commencing near Lawrence, the range being west toward Denver. Going west, therefore, we come upon the different courses of the roof, one rising above the other, as the overlaps occur at various intervals of increasing altitudes. The coals, therefore, which are found near Ellsworth are higher up in the carboniferous series, and by Prof. Swallow and others are cast among the Permian. But for all practical purposes they are upper carboniferous. Traces of coal occurring in their bands, intercolated between sandy shales, are found in the vicinity of Ellsworth and Fort Harker, but they give no workable vein. Map No. 1 shows a section near Turkey Creek, two and a half miles southwest of Ellsworth, where the bank is nearly fifty feet high. In the stratum marked "Shale and Coal" are a dozen or more thin seams of coal, which, if collected, would make one of eight or ten inches in thickness, and of good quality. This is important only as showing the vicinity of a coal formation. It is twenty miles east of the workable veins, and may be considered as the eastern limit of the Smoky Hill coal field.

From this point—the mouth of Turkey Creek—coal increases in thickness as we go westward, and becomes a solid vein of twenty-four inches in the high bluffs at the mouth of Wilson's creek, and further west, three miles in a direct line, attains a thickness of from forty-five to forty-eight inches. At this point it is seen extending west and south, maintaining an average thickness of forty-six inches. Toward the north it diminishes rapidly, and is not seen north of the Smoky Hill River. Nor has it been discovered west, except in the excavation shown in map No. 8, which extends perhaps eighty feet, and shows no diminution in that direction. The first opening was made in the bluff south of Wilson's Station by the "Ellsworth Coal Mining Company." It is on the south side of the river, a few rods above the mouth of Wilson's Creek. Map No. 2 describes the successive strata seen in the bluff. The stratum or vein of coal is uniform two feet, and often twenty-six inches. It is easily mined—the entire mass or thickness breaking down when worked either by wedge or blast. It is free from water, has a good roof of indurated clay and sand unlike any we have seen hitherto, and resembling rock in hardness. It has been worked at only one adit, one hundred and fifty feet in length, extending southeast. The width of the entrance is eight feet. Only two rooms have been made, and everywhere the same average thickness is maintained. In many places are found veins of gypsum, extending in every direction, giving shapes to the masses of coal which break in the direction of the vertical veins. This coal is of a peculiar quality. It is not lignite, as it has been generally called, but rather an imperfect coal. Lignite has a fibrous structure, like carbonized wood, which it really is; but the Smoky Hill coal is amorphous. It has no structure; it does fracture. It has no lustre like common bituminous coal. It has a slight stratification, and is full of charcoal masses. It is tough, rather than brittle. It can be pulled in pieces, but not easily broken except in horizontal layers. Large masses of from forty to eighty pounds, exposed to the air, retain their shapes, a small portion only scaling off on exposure. Kept from rains, it becomes quite dry. These coals were tried in grates and stoves at Ellsworth and Fort Harker. They entirely consume, but not rapidly; they have no clinker and no sulphur, though slight traces were found among the accompanying shales and slates, the amount of each being probably from fifteen to twenty per cent, and of a light color. In burning it resembles peat, but gives a stronger heat. It affords, also, a white flame of considerable volume. It does not kindle readily, but when thoroughly ignited will maintain itself as well as any bituminous coal. It consumes faster than ordinary coal, nearly in proportion of three to two. With a proper combination of fire-box and grate, and a favorable disposition on the part of the engineer and fireman, the Smoky Hill coal will perform the work required on the Kansas Pacific Railway.

The experiments of Mr. Boon, Master Mechanic of the Union Pacific Railroad, with the coal, are reported in general terms as follows:

"One ton of coal was sufficient to draw a train of cars twenty-one miles. No details were mentioned. It would be more satisfactory to use twenty or thirty tons, setting apart an engine for that particular use or experiment. It should also be tried with stationary engines, furnaces and stoves. The opening No. 2 (see map No. 3,) is four miles southwest of Wilson's Creek Station, on section three, township fifteen, range eleven west, in Russell county. It is the same vein as No. 1, but is increased in thickness to forty-five inches, and in some places to forty-eight. Near the middle of the stratum is a vein of hard clay, dark colored, and from four to six inches in thickness. There are two openings in this bank—one extending eighty feet, the other perhaps ten feet. Both veins present the same features, (that is No. 1 figure of map 2, and No. 2 figure of map 3,) with the exception of increased thickness in the western vein.

"In opening No. 2 the band of clay, from four to six inches, does not interfere with the profitable working of the coal, but rather facilitates it, the whole mass breaking down, and the clay band being easily separated in pieces. Going north from No. 2 toward the railroad, the vein decreases in thickness, and in one-quarter of a mile measures twenty inches scant, as seen in map No. 4, suggesting that the body of coal lies south and west from the opening in mine No. 2. Judging from the persistence and uniformity of either vein—Nos. 1 and 2—which are doubtless one and the same, the quantity is apparently inexhaustible. Further examinations will doubtless furnish other outcrops or openings of the same vein.

"As the supply of wood in that district for local and locomotive purposes is exhausted, the use of this coal is now a necessity, and its abundance is another proof of the Divine beneficence."

The Ellsworth Coal Mining Company commenced mining these coals in the fall of 1867, and labored under great difficulties. They expended upwards of seven thousand dollars in making openings and preparations antecedent to mining, and pre-empted the lands—fifteen members of the company pre-empting one hundred and sixty acres each. They were also much annoyed by Indians, and on one occasion two miners were killed at Mine No. 1.

In 1869 coal to the amount of sixteen thousand dollars was purchased from the Ellsworth Coal Company by the Kansas Pacific Railway Company, at the rate of thirty cents per bushel. It was got out of Mine No. 2. However, it was very carelessly (if not fraudulently) mined—they taking out slate, selvage and coal mixed, and delivering it in that state. Added to this, the Railway Company had no sheds prepared to receive it, and being exposed to the wind and rain, the coal was destroyed and never used. It does not seem probable, as yet, that it will be used for locomotive purposes; but for manufacturing and domestic purposes, it will ere long prove invaluable. Many experienced miners and geologists have expressed their firm belief that a very fine quality of coal exists lower down, and not farther than fifty to one hundred feet; but no one, as yet, has had the enterprise to bore for it. Sooner or later this will be done.

The maps referred to by Prof. Wilber were simply tracings of the coal veins and the overlying strata, and being of small importance, have not been given in this book. In April last, eight car loads of this coal were got out of the vein southwest of Wilson, carefully mined, and thoroughly tested by Mr. Waugh, Superintendent of Machinery, and it was found that owing to the large proportion of ashes it made, it clogged the grates and could not be used for locomotives. It is the opinion, however, of all the experienced miners who have visited this outcrop, that beneath it is to be found a very superior coal.

WALKER.

10 Miles from Fossil. 274 Miles from Kansas City.

A SWITCH, situated a half mile west of Walker's Creek, which crosses the railway track, and is bridged with a substantial trestle-work bridge. There is clear spring water, abundance of springs, fine rich soil, and a quarry of magnesian limestone within a mile of the switch. This is now, probably, one of the finest points for the settlement of a colony on the whole line of railway, surrounded, as it is, with a magnificent country yet open for homesteads, pre-emption, and purchase.

HAYS.

15 Miles from Walker. 289 Miles from Kansas City.

FORT HAYS was established June 22nd, 1867. It is situated on a slightly elevated piece of ground, a quarter of a mile from Big Creek, a branch of the

Smoky Hill Fork of the Kansas River, ten miles north of the Smoky Hill Fork, and fifteen miles south of the Saline River. It is in latitude 38° 59′, north longitude, 99° west from Greenwich. The reservation on which it is located is irregularly triangular, its extreme length being six miles; breadth three and one-half miles, and containing about 7,500 acres. The present (March, 1872,) garrison of Fort Hays consists of the Headquarters and three Companies of Sixth Infantry, and a troop of the Sixth Cavalry, Major R. M. Morris, commanding.

Hays City is the county seat of Ellis county, and situated on Big Creek, about half a mile from the Fort. Up to the spring of 1869, it was like most frontier towns—full of business and iniquity; since then, however, a very different *regime* has been established, and it is now a quiet, orderly place. From this point the Government receives all its supplies for the points south, viz: Camp Supply, in the Indian Territory, and Forts Dodge and Larned, in Kansas. During former expeditions against the redskins, this was the base of supplies, and it was from Hays that Gen. Sheridan commanded and directed the movements of the troops during the famous Indian war of 1868. At that time it was not safe to venture a mile from town. But in the districts where at that time Indians camped and fought, are now cattle ranches, and, in some instances, agricultural farms. The Kansas Pacific Railway was completed to Hays in September, 1867, and at that time the town consisted of some twenty tents. It now contains three general stores, three boarding houses, one bakery, several saloons and billiard halls, two blacksmith shops, one wheelwright, two barbers' shops, one hotel and numerous dwelling houses. The principal business men are Kruger Brothers, general outfitters and grocers, and M. G. R. Treat, same business; the latter is also proprietor of the Gibson House, a comfortable and well kept hotel. The principal liquor dealers are Thomas Drum, generally known as "Uncle Tommy," and John Walsh. North of Hays City, on the Saline River, are some very nicely arranged cattle ranches, and in less than two years from date, the hills and slopes that are now covered with buffalo will be grazing ranges for domestic cattle. The country hereabouts is undoubtedly better adapted for grazing than agricultural purposes, although the low lands or valleys of the Saline River—Paradise, Prairie Dog, and Eagle Creeks—are well suited for farming purposes, and at this time some fine farms have been laid out there. These bottom lands are rich black soil, and the timber on the streams is good—principally ash, elm and hackberry.

The voting districts of the county are Hays City and Ellis; at the former the number of votes polled at the last election was 285.

ELLIS.

13 Miles from Hays. **302 Miles from Kansas City.**

THIS IS a refreshment station, and here the Superintendent of the Smoky Hill Division has his office.

At a point one mile west of Ellis, the Western Kansas Agricultural Association purchased some land, and on the 8th of May, 1871, commenced to break prairie and to sow and plant such seeds as the recently broken sod could receive, and which, at that late period, could be put in with any prospect of success. These were garden vegetables, cucumbers, melons, squashes, pumpkins, transplanted tomatoes, and sweet potatoes; corn, broom corn, sorghum, Hungarian grass; acorns, chestnuts, black walnuts, and other tree seeds. The result far exceeded all expectations. The sorghum and sod corn could not be beaten on sod ground in Illinois; and as to the cucumbers, melons, squashes and pumpkins, the crop was abundant, and uniformly fine and large specimens. The Hungarian grass yielded two crops of hay, and in the last crop there were many specimens of over one hundred stalks to the stool. Tomatoes and sweet potatoes did well, and the peanuts ripened and yielded at the rate of seventy bushels to the acre. The oaks, chestnuts and black walnuts grew to the height of from six to eighteen inches.

In September, twenty acres were cross-plowed and sown with wheat and rye, which, at this writing, (February 15th,) look remarkably well, and promise better than the same crops in Eastern Kansas.

The Association have at this time about one hundred and thirty acres broken, and intend to establish a nursery, vineyard and orchard, and eventually to set miles of hedge and plant acres of timber. The vicinity embraces very rich soil and abundance of good water. Dr. L. Watson is the manager of the Company, and may be addressed at Ellis.

OGALLAH.

10 Miles from Ellis. **312 Miles from Kansas City.**

HERE THERE is only a side-track. More properly Ogalallah, the name of a branch of the Sioux tribe of Indians.

PARK'S FORT.

9 Miles from Ogallah. 322 Miles from Kansas City.

About three miles before reaching this station, the traveller will observe, on the top of a knoll near the track, a lot of earth thrown up in a large circle; this was thrown up some two years ago by a trader named Park and a negro, to defend themselves from a party of Indians, who attacked them. They were forced to retreat to the bluffs north of the track, where they got into a cavity in the rocks. The Indians, however, discovered their hiding place, and threw down rocks and dirt on them. Park was killed; but after the Indians had gone, the negro escaped with his life.

The section-house here is kept by Barney Day, a very successful hunter and trapper, and a good taxidermist. Stuffed heads of the buffalo, elk, deer, etc., may generally be seen in his collection, should the train stop long enough. There is also a good water tank at this point.

COYOTE.

14 Miles from Park's Fort. 336 Miles from Kansas City.

Here there is a good section boarding-house, soldiers' quarters, tank and four dug-outs. An immense number of buffalo were slaughtered round this station this spring, and large quantities of the meat and hides shipped from here for the East. It derives its name from the coyote, or prairie wolf, which infests these regions. Their skins are worth about one dollar each for robes, and are procured by poisoning the carcass of a buffalo with strychnine when warm; the poison permeates the carcass, and the coyotes, which come to feed on it at night, are instantly killed.

BUFFALO.

16 Miles from Coyote. 352 Miles from Kansas City.

Like most of the frontier stations, has as yet taken no steps in the way of agriculture. The soil is as good as can be found on the Plains, but this part of the country seems chiefly adapted for stock grazing. The Saline River flows four miles north of the station; the Solomon River twenty miles north;

on the south is Big Creek, six miles; Hackberry Creek, fifteen miles; and the Smoky Hill River, thirty miles—thus affording abundance of water and fine stock ranches. This being the present centre of the buffalo range, they are found here in larger quantities than at any other point on the road. There is a telegraph office, soldiers' quarters, turf house and tank here.

GRINNELL.

12 Miles from Buffalo. **364 Miles from Kansas City.**

HAS A SECTION house, railway tank, six "dug-outs," and two large turf houses, built for the purpose of drying buffalo meat.

CARLYLE.

12 Miles from Grinnell. **376 Miles from Kansas City.**

HAS A SECTION house, six "dug-outs," wind-mill tank, and coal-bin.

MONUMENT.

10 Miles from Carlyle. **386 Miles from Kansas City.**

HAS A FINE windmill tank, station and section house.

GOPHER.

11 Miles from Monument. **397 Miles from Kansas City.**

SHERIDAN.

8 Miles from Gopher. **405 Miles from Kansas City.**

A SECTION boarding-house, soldiers' house and fine tank is all that remains of Sheridan. This place was for some time the terminus of the road, and possessed of thirty or forty houses, infested by about as hard a set as can be well imagined. A rude grave-yard, about one hundred yards north of the station, contains the remains of thirty or forty men shot or hanged here during the reign of ruffianism. When the Railway was completed to Denver, most of the buildings were moved to Kit Carson, and the place was broken up. It took its name from the celebrated Phil., who dined one day in the first dug-out built there.

WALLACE.

15 Miles from Sheridan. 420 Miles from Kansas City.

Is LOCATED on the military reservation of Fort Wallace, which Post is about the only feature worthy of notice at this point. There are a very comfortable hotel and refreshment rooms at this station, and the passenger trains stop here for breakfast and supper. The managers of this hotel set a first-class table, and the traveler on the Kansas Pacific Railway across the Plains may indulge himself with the expectation of a good buffalo or antelope steak, which delicacies of the prairies are nearly always to be had at the Wallace Hotel. The country to the north, east and west is rolling prairie, to the south broken and rugged for a distance of four or five miles, then smooth rolling prairie. The land is well watered in the vicinity of the track by the Smoky Hill River and its branches; the soil is good, and the bottoms may be made very productive. The average temperature here is 52°, and the location is found to be extremely healthy. The population of Wallace is 100.

The Fort is situated two miles southeast of the station, and is now (January, 1872,) garrisoned by the Headquarters of the Third Infantry, Companies "A," "H," and "E" of that regiment, and Company "D" of the Sixth Cavalry; commanding officers, Col. DeL. Floyd Jones, Third Infantry, commanding post; Captains Edward Moale, Louis T. Morris, and Robert P. Hughes, Third Infantry; Capt. Jno. A. Irwin, Sixth Cavalry, and Lieut. Wm. A. Kobbe, Third Infantry, Post Adjutant. The Post was established in June, 1866, and is located on the south fork of the Smoky Hill river, in latitude 38° 55′, and longitude from Greenwich, 100° 50′. The Fort consists of the following buildings: Quarters for five Companies—two stone, two wood, and one stone and wood building in good condition; officers' quarters, seven sets of small frame buildings; three store-houses—Quartermaster's store-room, twenty-eight by one hundred and thirty feet; Commissary store-room, twenty-eight by one hundred and thirty-two feet, inside measurement; walls, ten feet clear;

wood grain-house, capacity 13,000 bushels; the Hospital, Guard House, Magazine and stables are built of stone; assistants' office and one cavalry stable—wood—all in good condition.

Subsistence stores are obtained from Depot C. S., Fort Leavenworth; purchasing C. S., St. Louis, and Denver, by requisitions on C. S. Department of Missouri. Beef is supplied by contract. The military reservation is fourteen miles square, and forty acres of this have been given to the Kansas Pacific Railway, on which to erect their depot building, round house, etc.

Mr. W. H. Wheeler, who was appointed post trader by the Secretary of War in 1870, has a ranche seven miles southwest of Fort Wallace, with six hundred head of cattle, and with irrigation has raised very fine crops. The Kansas Pacific Railway was completed to this point in November, 1869.

EAGLE TAIL.

9 Miles from Wallace. 429 Miles from Kansas City.

Is situated on Eagle Tail Creek, which furnishes very fine water. Here there is a section-house and tank.

MONOTONY.

8 Miles from Eagle Tail. 437 Miles from Kansas City.

Both Monotony and Eagle Tail are old Indian crossings, used by the Sioux, Arapahoes and Cheyennes in their journeys North and South, on account of the plenitude of good water. There is a telegraph office, section-house, tank and stationary engine here.

ARAPAHO.

15 Miles from Monotony. 452 Miles from Kansas City.

Section house and tank.

CHEYENNE WELLS.

10 Miles from Arapaho. 462 Miles from Kansas City.

This place abounds with good water, and was formerly a great rendezvous for the Cheyenne Indians, and it was here they held their pow-wows, war councils, etc.

FIRST VIEW.

10 Miles from Cheyenne Wells. 472 Miles from Kansas City.

So called because here you get the first glimpse of the Rocky Mountains, Pike's Peak being clearly discernible on a clear day at a distance of over one hundred and fifty miles.

EUREKA.

Supposed to have had this name given it from the fact that some of the earliest emigrants, after a long journey, without water, here first found it—"Eureka" being Greek for "I have found it." Tank here and good water.

KIT CARSON.

14 Miles from First View. 486 Miles from Kansas City.

Is a town of a few hundred inhabitants only, but, though containing a small population, its fame is perhaps nearly as great as that of the illustrious frontiersman and scout in whose honor it is named. It sprang into existence on the completion of the Kansas Pacific Railway to that point, and is now a remarkable and important commercial center. The situation being a wild and romantic one, and being near the home and haunts of the famous Kit Carson, that was deemed the most appropriate name. It is noted principally as being the nearest railroad point to New Mexico, Arizona, and Southern Colorado, and the place to which all commercial supplies are shipped by rail for this vast and rapidly developing southwestern country. The business of receiving, storing, supplying and re-shipping, by ox and mule trains, the goods consumed by this country, and of buying and shipping the quantities of wool, hides, etc., produced here, is done principally by wholesale and commission houses, established at Kit Carson, and operating with a large amount of capital; many millions of dollars' worth of goods pass through these houses annually, and their sales alone will amount to perhaps not less than a million dollars per annum. There is here a large Government warehouse, or supply depot, to which supplies are shipped for all the Government Forts in New Mexico, Arizona and Southern Colorado. These goods are all shipped from here by ox and mule trains for their destination, and the long lines of transportation wagons, as they come and go, winding across the prairie with their white canvass covers, often form an interesting and picturesque scene.

The town has two good hotels, and a daily line of four-horse stage coaches running to Santa Fe, New Mexico, and connecting there with stages for points in Texas, Old Mexico, Arizona and California. A peculiarity of Kit Carson is, that while it is situated in what was but recently a remote part of the great Plains, and surrounded by countless thousands of buffalo, antelope and other game, its railway facilities enable it to afford most of the comforts of a large metropolitan center. Fresh from California, vegetables are in the market here as early as the first of March, and all through the summer California fruit is to be had here in abundance. Owing to the superior hotel accommodations, and the abundance of game, this is a favorite stopping place for hunting parties; and it was here that in January, 1872, the Grand Duke Alexis, of Russia, had his big buffalo hunt, killing over forty of these noble animals. The surrounding country is being extensively prospected by stock men, and several ranches have already been established. It is estimated that before many years thousands of domestic cattle will graze where now the wild herds roam in such profusion.

WILD HORSE.

12 Miles from Kit Carson. 498 Miles from Kansas City.

TAKES ITS name from the herds of wild mustangs that used to (and even now sometimes do,) roam in the vicinity. Last fall seven were caught a few miles south of Hugo, by means of pit-falls, carefully concealed, into which they fell and were easily captured. There is a tank and coal-bin here, and a "dug-out," used for a section-house. Mr. Dudley, an engineer in charge of a party of construction on the Denver Extension, was killed here with some fourteen others, by the Indians, in 1869.

AROYA.

13 Miles from Wild Horse. 511 Miles from Kansas City.

IS SITUATED on the bank of a deep ravine, for which arroyo is the Spanish word. Boarding car and "dug-outs."

MIRAGE.

12 Miles from Aroya. 523 from Kansas City.

Is SITUATED on Coon Creek, which furnishes the best of water, and has a tank and two "dug-outs." It takes its name from the curious optical illusion to be seen here in the summer, resembling distant lakes and sheets of water. If the weather and air are favorable, this beautiful illusion may be often witnessed at this point.

HUGO.

11 Miles from Mirage. 534 Miles from Kansas City.

HAS a fine commodious hotel, well furnished, and with our jovial friend and well known plainsman, Capt. Barron, for host, is one of the best, if not the best, on the line. Capt. Barron is one of the veritable pioneers of the Great Plains, and has lived on them for twenty-two years, fourteen of which he spent without ever going as far east as the Missouri River. Many the dangers and hardships to which he has been exposed, and many the Indian fight of which he was the hero. Should the tourist have the good fortune to stop for refreshments at Hugo, he will find the best of tables, and when he shakes Capt. Barron by the hand, will know that he meets the grip of one of the finest specimens we have of the hardy, honest frontiersman, and one who is known from the Missouri River to San Francisco. There are about twenty houses at Hugo, two general stores, and about seventy-five people.

LAKE.

13 Miles from Hugo. 547 Miles from Kansas City.

TAKES ITS name from a chain of pools, at least half a mile long, which lie close to the station. This is an old stage station, and was burned by the Indians in 1867, and fired again by them in 1869. At that time Capt. Barron kept the station, but was absent from home; his family were saved by his Newfoundland dog, "Ned," who fought the Indians till some of the men about the place were aroused, and turned out, when the redskins fled, and the fire was put out by a few pails of water. Old "Ned" was badly wounded by their spears, and still bears the scars.

RIVER BEND.

8 Miles from Lake. 555 Miles from Kansas City.

So CALLED because situated on the big bend of the Big Sandy. On the 21st of May, 1870, the Indians made a raid on this place, and killed Tallman, one of the graders on the construction of the road. Capt. Barron's son was herding cattle there at the time, and was also attacked; but having a shovel with him, and rifle and ammunition, he dug a hole, got in it, and kept fifty Indians at bay for four hours, until assistance arrived. The Indians, however, drove off his horses.

CEDAR POINT.

7 Miles from River Bend. 562 Miles from Kansas City.

Is SITUATED on the top of the Divide between the Arkansas and Platte rivers. [illegible]here is a fine grove of pine and cedars within sight of the station.

GODFREY.

4 Miles from Cedar Point. 566 Miles from Kansas City.

Is CALLED after Mr. Godfrey, who some time since organized a coal mining company and worked a vein of coal here. It was found to be very useful for domestic purposes, but not of sufficiently good quality for locomotives, and the work was abandoned.

AGATE.

6 Miles from Godfrey. 572 Miles from Kansas City.

HAS ITS name from the abundance of moss agates which are found here. Section house, soldiers' house, tank, and dug-out.

DEER TRAIL.

11 Miles from Agate. 583 Miles from Kansas City.

SITUATED ON East Bijou creek, on which there is some fine timber.

BIJOU.

12 Miles from Deer Trail. **595 Miles from Kansas City.**

AT THIS point there is the best of water and fine timber, both pine and cottonwood. It was called Bijou, because the water was indeed a *jewel* to the thirsty and weary traveler across the plains.

KIOWA.

13 Miles from Bijou. **608 Miles from Kansas City.**

ON KIOWA CREEK, which has its name from the Kiowa Indians. In 1868 the Indians made a raid on this place, killed Mrs. Diederman and six or seven others, and drove off four hundred horses. There is an abundant growth of cottonwood timber along the banks of Kiowa Creek, and from the head waters, forty miles distant, an immense quantity of ties were cut and hauled for the construction of the road.

BOX ELDER.

9 Miles from Kiowa. **617 Miles from Kansas City.**

ON BOX ELDER CREEK, which, like most of the streams in this locality, sinks beneath the sand, an admirable provision of Providence, by which the water is sheltered from the fierce rays of the sun and evaporation prevented.

SCHUYLER.

12 Miles from Box Elder. **629 Miles from Kansas City.**

IS NAMED after Capt. Howard Schuyler, one of the engineers on the construction of the road. This gentleman rendered himself conspicuous for his cool daring, and on one occasion, when at work near Sheridan, he was surrounded by ten or twelve Indians on horseback, who, of course, thought they had him safe, and one rode up to him laughing. Capt. Schuyler shot him dead with his repeating rifle, and then fought his way through them and escaped, both he and horse, however, being wounded.

DENVER.

10 Miles from Schuyler. 639 Miles from Kansas City.

THIS ARISTOCRATIC little burgh, romantically situated at the foot of the "Shining Mountains," is without doubt one of the most beautiful of the inland cities of the world. Can anything grander be imagined than the sight to be obtained here of the Rocky Mountains. Built on the Plains, within two miles of their base, to the north may be seen Long's Peak, over seventy miles away, rising fourteen thousand and fifty-six feet above the sea level; Gray's Peak, south of this, fourteen thousand two hundred and fifty-one feet; immediately opposite the town on the west, the beautiful pine-clad foot-hills and the Snowy Range, the region of eternal snows; and to the southward, Pike's Peak, seventy-six miles distant, towering fourteen thousand two hundred and sixteen feet above tide water, and eight thousand feet above the level—the whole forming a continuous view of over two hundred miles of mountains. It may seem incredible to those who have not witnessed the effects produced by this extraordinary atmosphere, that the beauties of a mountain could be discerned at from seventy to eighty miles; but such is the case, and it may be easily imagined when it is stated that many persons on first arriving in Denver have started from their hotels to walk to the mountains before breakfast, thinking it to be a distance of about two miles, when in reality it is twelve. The summit of Pike's Peak is visible on a clear day from First View, (one of the stations on the Kansas Pacific Railway,) a distance of one hundred and fifty miles; and in crossing the Great Plains, after first coming in view of the mountains, they appear as if easily reached in a day's journey by wagon train. Sportsmen have been known to shoot at antelope over a mile off, and tourists have attempted to attain the summit of mountains in an hour or two, which, in reality, would take a day's hard climbing. Denver is situated on the South Platte river, at the mouth of Cherry creek, and is the county seat of Arapahoe county. In the *Colorado Gazetteer* for 1871, its early history is thus given:

"The first rude trapper's hut built in Colorado occupied a site within the present limits of Denver, and was occupied by one of the omnipresent and never-dying Smith family. It was built in the fall of 1857. The first cabin, dirt roofed and built of logs in what is now East Denver, was the architectural conception of Gen. Wm. Larimer, whose name has been perpetuated in the principal street, as well as in one of the counties of the Territory, and saw the light of day in October, 1858. The place was then named St. Charles, and soon after a rival sprang into existence on the opposite side of Cherry creek, which was called by the classically ambitious name of Awraria. Its site is now simply known as 'West Denver.' Such is earthly glory. A month later the town site of St. Charles changed hands, and was named Denver, in honor of Col. J. W. Denver, then Governor of Kansas, to which all this region, now known as Colorado, was then an indefinite and unexplored western appendage. The first family on the ground was that of S. M. Rooker, who arrived from Salt Lake in August, 1858. The first business house was opened by Messrs. Blake & Williams. Mr. Blake's name has been canonized in Blake street, but that of Williams has been lost in the inexorable mutations of fate. The pioneer blacksmith was Thomas Pollock, who arrived from New Mexico in December, 1858. The first hotel was opened on the first of February, 1859, by Murat & Smoke, and was called the 'El Dorado.' The first child born was a half-breed son of one McGaa and an Arapahoe mother. The first election was in March, 1859. The whole number of votes cast in the county was seven hundred and seventy-four. Denver precinct polled one hundred and forty-four and Awraria two hundred and thirty-one.

"Up to this time there was not a pane of glass nor a board in either of the jealous 'cities.' All buildings were constructed of logs, without floors, and with dirt roofs. A saw mill was put up in the pineries, thirty miles south, in the spring of 1859, and soon began to supply the 'cities' with lumber. This was the beginning.

"The pioneer newspaper was the *Rocky Mountain News*, and was put forth by Wm. N. Byers & Co., the senior partner of which firm is now proprietor of that sheet.

"The first coach of the Leavenworth and Pike's Peak Express Company arrived in Denver May 7, 1859. The first election for county officers was held in March, 1859. The first matrimonial collision occurred on the 16th of the following October. The first legislative body ever convened in the Territory met in Denver on the 7th of November, 1859, and included among their acts the granting of a charter to 'Denver City.' The first election and formal organization under this charter was effected on the 19th of December."

The year 1872 witnesses the thirteenth anniversary of the birth of Denver. A little less than two years ago Denver had not a railroad, and was not considered much of a place, but now it has five railroads, and owing to that and to the exertions made by the Kansas Pacific Railway Company to people Colorado, its population is now 12,000. Over five hundred buildings were erected in 1870 and 1871, and her future growth promises to be still more rapid. The advent of foreign capital to work the as yet undeveloped gold and silver mines of the Rocky Mountains, the unsurpassable grandeur of the scenery, her health-restoring climate, the mineral springs and other summer resorts of the mountains, now gradually becoming known in the East, and which must be reached through Denver, and the fact of her being a great railway centre, are combining to make her the "Great City of the Plains." Such she certainly must be. The streets are broad and well paved, and are being rapidly lined with trees, some 300,000 of which were planted last year; and between the mountains and the city, on the western side, has been constructed the Boulevards—a splendid drive—some miles in length, also lined with trees, and along which, on fine days, handsome equipages and fast trotters may be seen bowling along in a style that would excite the envy and admiration of our Eastern and more ancient cities. At each end of the Boulevards parks are being constructed, one of them under the direction of Geo. S. Bowen, an eminent business man of Chicago, and here villa sites will be offered for sale. Adjoining the city on the northeast the Ford Park Association have a splendid race-track one mile in length, and perfect in its equipment, having a grand stand capable of seating two thousand people, and the whole encircled by a massive adobe wall, eight feet in height. A short distance north of this, permanent and handsome buildings have been erected, in which are held the Colorado Agricultural Fairs, and here, in September, 1871, the Colorado Agricultural and Industrial Association held their sixth annual exhibition, which, owing to the fact that 1871 was a most successful year in agriculture and horticulture, the prosperous condition of the mines, and the increased facilities for travel, was the most successful exhibition of the kind ever held in the west. During the past year Gas Works and Water Works, equal to any in the land, were constructed by our enterprising citizen, Jas. Archer, Esq., and within the last few years the water of the Platte River has been conveyed into the city by an irrigating canal, about fifteen miles in length, furnishing nourishment for the shade trees and tasty gardens, which have sprung into existence since its introduction. Then there is the Branch Mint, which does a heavy business in smelting and assaying gold and silver, and in turning it out in bars. Elegant churches and school buildings, handsome private residences, two fine breweries, two flour mills, three first-class hotels, and two newspapers—the *Rocky Mountain News*, a fine sheet, owned and most ably edited by Col. W. N. Byers, one of the pioneers of Denver, and the *Tribune*, edited by E. P. Hollister, Esq. Both are a credit to any city. Much

Gas
Water
Canal

more might be written about this beautiful city and its many attractions, but time and space will not permit. But should the tourist wish to expand his chest with the champagne air of the Rocky Mountains, drink mineral water, feel at least ten years younger, and see the most magnificent scenery in the world, by all means let him "Go to Denver."

THE UNION COLONY OF COLORADO.

To THE traveller over the Kansas Pacific Railway, whether seeking pleasure or a new habitation, the details of the trials and ultimate success of the pioneers who passed over the line in its earlier days to find a home at the foot of the "Shining Mountains," must necessarily be of interest, and few of these colony enterprises had darker days at the outset and achieved a greater final success than the Union, or as it is often called, "The Greeley Colony."

In the early part of December, 1869, an article entitled "A Western Colony" appeared in the *New York Daily Tribune*, signed by Mr. N. C. Meeker, (now editor and proprietor of the *Greeley Tribune*,) proposing the establishment of a colony in Colorado Territory. By the end of the month over eight hundred letters had been received from people wishing to join in the enterprise, and a meeting was held in New York on the 23d of December, Hon. Horace Greeley presiding, and on the 3d of February, 1870, the Locating Committee, consisting of Messrs. N. C. Meeker, H. T. West and Gen. R. A. Cameron, set out in search of the promised land. After a month's journeying through different States and Territories, they were enabled to send the tidings East by telegraph that on the 5th day of April, "Union Colony No. 1," N. C. Meeker, President, and Horace Greeley, Treasurer, located in Colorado Territory, on the delta formed by the junction of the Cache-la-Poudre and the Platte rivers, and on the Denver Pacific Railway, half way between Denver and Cheyenne, and the new town was called "Greeley." Of the Cache-la-Poudre in whose valley was chosen the site of this future "City of the Plains," Fitz Hugh Ludlow thus wrote in his "Heart of the Continent:"

"This stream is one of the most beautiful torrents which we saw on our entire journey. It comes from the everlasting snow line of the peaks about Cheyenne Pass, and its entire course to the Platte is broken by no great fall, with a tolerably even grade and considerable winding of direction. It swarms with fine trout, and is the most mysteriously seductive of streams."

On the 25th day of April, 1871, the first sod was turned in the new town of Greeley. The *Rocky Mountain News*, in commenting upon the location, said:

NOTES BY THE WAY.

"The town site will be in every respect desirable. Eastward the outlook is down the plain that stretches unbroken to the Missouri River, six hundred miles away, relieved by the groves and fringes of timber that skirt the Poudre and Platte Rivers and Crow Creek. North and South are rolling prairies, and Westward the same to the Mountain foot, twenty-one miles distant, but plainly distinct, and in the wonderfully clear, rarefied atmosphere, seeming scarce half a dozen miles away. Beyond that line rises the great Rocky Mountain chain, massive and dark with pine forests, rising ridge beyond and above ridge until they culminate in the lofty, snowy range, sixty miles away, and with a sweep of at least a hundred and fifty miles. Long's Peak is the nearest and seems the loftiest in sight. It bears southwest by west and is over fourteen thousand feet high. Snow is always visible on the main range."

At this writing (January, 1872,) Greeley contains over fifteen hundred inhabitants, and has three churches—the Baptist, Methodist and Presbyterian already built, and the Congregationalists will build this year. There are also several good stores which do a trade of from two hundred to five hundred dollars per diem; machine shops, three schools, (the primary, intermediate and high school,) a grist mill, bank, newspaper, several orders of fraternal societies, and in short, whatever pertains to a town of its size in the East. Cultivation is aided by irrigation. Two irrigating canals have been built, one ten and the other twenty-seven miles long, and the whole domain is enclosed by a substantial fence, making interior enclosures unnecessary. The crops last year were for the most part good, considering that the land was new; and the yield of vegetables was astonishing. Fruit trees and all the small fruits thrive well. The trade with the several villages towards the Mountains, which are twenty miles distant, is constant, and supplies of flour and vegetables are already sent both to Denver and Cheyenne. No liquor is sold in the place, nor are gambling establishments allowed. About half of the people are church members. There is no kind of community of interest—every man being for himself.

It is intended that the place shall be a desirable residence for families wanting the advantages of education. In common with all of Colorado, it is extremely favorable for invalids with weak lungs; as Greeley has a less elevation than any other place, the shock on first coming from the States, is probably less here than in places of a greater altitude. Still, the town is new—much is to be done; a man with small means can do well, while capitalists can find plenty of chances for investment. The colony covers upwards of thirty thousand acres of land, and is in a most thriving condition.

To the tourist who wishes to start from Greeley to view the beauties of the mountains, there are two places that offer great advantages—Estes Park and the Great Cañyon of the Big Thompson, which are within two days' drive of the town.

Fishermen and hunters have followed up the creek to Estes Park, but at present the only available route to that place is by a trail running from St. Vrain's Canyon. Up hill and down hill the road leads, but not as the old roads wind. "Now to the church and now to the mill"—such things are left far behind; it is rather a blind following of the old deer trails, for now we are entering upon the favorite haunts of the great Elk, whose branching horns may be seen on every side, whitened by rain and sun. Estes Park is situated at the base of Long's Peak, from which it extends in a northeasterly direction about ten miles. The Park is divided by a mountain, that is waiting for a name, into two sections; through the northernmost one the Big Thompson finds its way; this stream is said to abound in that finest of fish, the speckled trout, but like all our wild western creations, his education has been a little neglected. He won't bite an artificial fly. Fortunately a substitute, and one that he understands, is generally near at hand, in the shape of a grasshopper.

The tracks of elk and deer may also be seen on every side, which generally is as exciting as if the animal itself were there, for it is the old question answered here—the pursuit is nearly as pleasant as the possession.

Here are opportunities for any one desirous of naming points, lakes and canyons innumerable. There is Mount Olympus, with its rocky front looking as sternly severe as Jove himself might have looked, almost a solid rock, whose summit is eight thousand feet above the sea's level. There to the right is Black Canyon, with its sombre shading of trees and its bold sharp sentinels of rock guarding its entrance. To the left is seen Lily Mountain, twelve thousand feet high, with its bold face looking frowningly at Long's Peak, as if angry because that mountain dared to hold its head six thousand feet higher. And then at the foot of Long's Peak is a wonderful chasm, with a perpendicular side running clear up to nearly the top of the Peak. Then there are the lakes that duplicate the mountains and rocks on either side. There is the little mountain brook, half hidden among the massive rocks it tumbles over, offering a cool retreat from the heats of summer, and at every step a pleasing picture. There are valleys branching off from the main Park that would undoubtedly amply repay exploration in the many new and varied forms they might present; there are detached rocks of huge size, up and down which the Rocky Mountain sheep jump and run with a swiftness that forbids pursuit.

The flora of the valley of Cache la Poudre is said to be extremely beautiful. In writing on this subject, A. J. Wilber, Esq., says:

"In May, the river bottoms became bright with soft, fresh grass. The cottonwood put on the richest green that nature has in her dye room. The air was filled with fragrance, the breath of the bursting leaf and flower-buds of the sweet briar; later they were resplendent with bloom, and now with bright red buds, which, mingled with the white wax-berry, produce a fine contrast, and the clumps of green ash and soft maple make the whole seem a garden of rare richness. Near by, the wild plum and cherry, with hazel and willow, compose thickets over which the virgin's bower—*clematis*—loves to throw its beautiful white spray; all having a fine background in the small cottonwoods whose leaves show all of autumn's tints. The wild hop and many other vines tangle the whole into a mass in which the rabbits hide. Thickets of wild sunflower furnish shelter and food for grouse. Among the open growth the beaver has made his mark, and gone where he may live with the savage, the white man being too grasping for him. Here are the stumps of many trees he has cut—one over two feet in diameter.

"But this wildness is the exception, the rule of this flora being to produce the effect of a great landscape garden, where the outlines of the hills are toned down, and reduced to rule and beauty by the gray, the brown and the green of the everywhere prevailing grass—the rich grass of the plain, at present its most valuable production.

"This will please the reflective, loving soft beauty; but if the mind is attuned to wildness, seek the mountains, where the small plants, the vines, the deciduous and evergreen trees cluster and cling round the huge rocks, and make fitting home for mountain lion or panther, or anon leave mountains of stone in desolate grandeur."

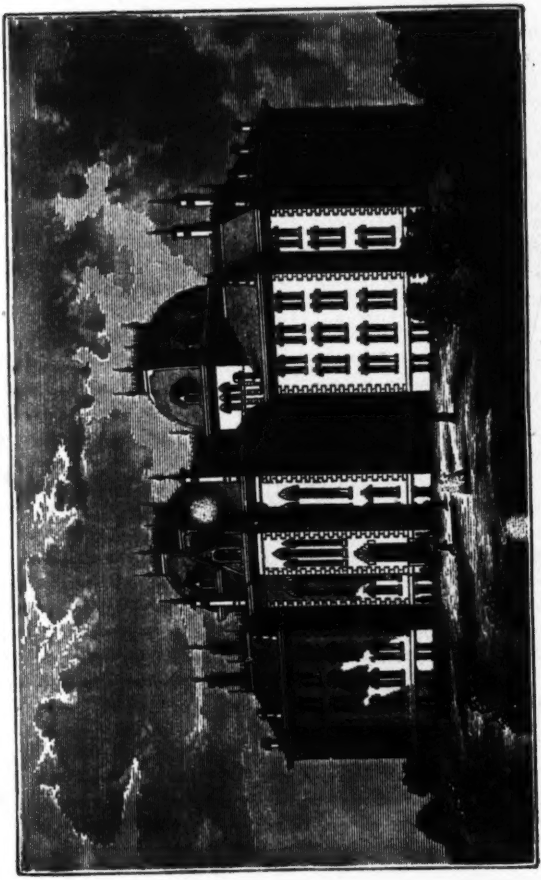
THE ST. LOUIS WESTERN COLONY.

WAS LOCATED on the 15th of March, 1871, at Evans, the county seat of Weld county, Colorado. The village is situated on the line of the Denver Pacific Railway, at the crossing of the South Platte River, and about midway between Denver and Cheyenne. It numbers now (February, 1872,) about six hundred inhabitants. The site of this Colony is the natural centre of the rich valleys of the Platte, Thompson's, St. Vrain, and Cache la Poudre. The Colony has complete control of the town site of Evans, and has secured some 6,000 acres of farming lands, lying on each side of the railroad and the

Platte River, and immediately adjoining the town site. The Colony has completed one irrigating canal, about six miles long, extending through the town site, and intended to furnish water power for machinery. Another irrigating canal is now being constructed, and a portion of it already finished, which will be forty miles long, with an average fall of five feet to the mile Evans is now possessed of good passenger and freight depots, and a mail twice-per diem. There is a telegraph office, and also a weekly newspaper, called the Evans *Journal*, with a good circulation. Among the many advantages of Evans as the location of a colony, are its abundance of pure water, the remarkable healthfulness of its climate, its proximity to the mining cities and villages, and to vast herding fields, and the fertility of the soil. By an arrangement recently completed with the Colorado and Emigration Society of Europe and America, whose headquarters are in London, there is a reasonable prospect of these lands being ultimately settled with English as well as American emigrants.

INDEPENDENCE COLONY, NEW MEMPHIS, COLORADO.

THE TOWN of New Memphis was laid out about the beginning of April, 1871. It is situated in a pleasant location on the east side of Plum Creek, thirty-one miles south of Denver, on the line of the Denver and Rio Grande Railway. The views from the town are truly magnificent, as a range of two hundred miles of mountains can be seen, extending from Long's Peak on the north to Pike's Peak on the south. One great object of interest in the immediate neighborhood is Castle Rock, which stands about 700 feet above the sea level, and is about one and a half miles south of the town. The north and east sides of New Memphis are sheltered by picturesque pine ridges, and on the west there is a clear view of the Rocky Mountains. Coal has been discovered near by, which is now being mined, though as yet only to a limited extent. The ground in this locality is naturally adapted for irrigation. The soil is rich, and various paying crops can be raised. In addition to other facilities, this is one of the finest points in the Territory for grazing and stock raising. Mr. Craig has a herd of five hundred horses here, and within two miles there are some extensive stock ranches, where the owners have imported blooded stock, and are breeding cattle with much success. Messrs. Shipp, Kaufman, and Thos. Harris, of Memphis, Tennessee, have thus far been the principal builders of New Memphis, and they have already a good hotel, general store, grocery, blacksmith's shop, saloon, and several private residences. The advantages offered to those who desire to settle here are very superior. No sum of money is asked from those who wish to join the Colony, but simply to go there and build, for which purpose a lot will be given free of cost. By application to Mr. Thos. Harris, New Memphis Colony, rates of passage can be procured from Kansas City to that place.



UNIVERSITY OF KANSAS, LAWRENCE.

Institutions of Learning.

UNIVERSITY OF KANSAS.

THE UNIVERSITY is situated in the city of Lawrence Douglas county, Kansas, about a mile from the intersection of the Kansas Pacific, and Leavenworth, Lawrence and Galveston Railways. The government of the University is vested in a Board of Regents, consisting of a President and twelve members, appointed by the Governor of the State, by and with the advice and consent of the Senate, and holding their offices respectively for the term of six years from the first Monday of September succeeding their appointment: *Provided*, That not more than three of the Regents to be appointed shall be of the same religious denomination.

THE FACULTY.

The Faculty at present comprises the following instructors, viz

John Fraser, Chancellor and President, and Professor of Mental and Moral Philosophy.

David H. Robinson, Professor of Ancient Languages and Literature.

Frank H. Snow, Professor of Natural History and Meteorology.

Frederic W. Bardwell, Professor of Mathematics and Astronomy.

E. P. Leonard, Professor of Modern Languages.

D. O. Kellogg, Jr., Professor of History and English Language and Literature.

Fred. E. Stimpson, Professor of Chemistry and Physics.

A. J. S. Molinard, Professor of Engineering and General Industrial Drawing.

Albert Newman, M. D., Special Instructor in Human Anatomy and Physiology and Hygiene.

J. E. Bartlett, Special Instructor in Vocal Music.

STUDENTS.

Number examined for admission or advancement since last annual catalogue (February, 1871)	292
Number admitted and advanced in aggregate attendance for 1871	265
Number in Collegiate department	56
Number whose homes are in Lawrence	67
Number whose homes are in other places	198
Number of counties in Kansas represented	23
Number of States represented	16

The unusually large number of inquiries regarding the University, received during the past year, from all parts of Kansas, and from many of the older States, warrants the expectation of a largely increased attendance for the current year.

The regular courses of instruction given in the University are three, viz: 1st. A Classical Course; 2d. A General Scientific Course; 3d. A Course in Civil and Topographical Engineering. The requisites for admission to these courses cover substantially the same ground as those of the University of Michigan, and other institutions of equal grade.

Students whose circumstances prevent them from taking a complete course, are allowed the privilege of taking such a select course as they are found, on examination, to be able to pursue with advantage.

A Preparatory Department has been organized to supply the existing want of suitable Preparatory Schools in the State, and therefore will not be made a permanent feature of the University.

APPARATUS OF INSTRUCTION.

The Chemical Department is supplied with laboratory stands, and with the apparatus and chemicals requisite for a complete course of laboratory practice in Analytical Chemistry.

The Department of Astronomy is provided with a Green's *Standard Barometer* and Thermometer, an Astronomical Clock, and a five-feet Astronomical Transit with illuminating lamps, for the use of students in Observatory Practice; and with a Gambey's Sextant, an Artificial Horizon, and a Negus Box Chronometer, for use in Field Practice in Astronomy.

The Department of Engineering possesses an Engineer's Transit, an Engineer's Y Level, and all the requisite accompaniments for the most approved kind of *Office* and *Field* work in Engineering.

The collection of Philosophical Apparatus affords the means of making a wide range of experimental illustrations in Mechanics and Physics.

The Cabinets for the illustration of Geology, Mineralogy and Zoology contain a valuable and useful collection of specimens. The friends of the University are invited to send to these Cabinets such specimens as may add to their completeness.

SESSIONS AND VACATIONS.

The Academic Year is divided into two sessions of twenty weeks each. The first or winter session is relieved by a recess, which includes the Christmas and New Year holidays; the second or summer session, by a recess of one week, beginning at or near the 20th of March. The summer vacation begins at Commencement, and continues twelve weeks.

CALENDAR FOR 1872.

January 24th—Second Session begins........................Wednesday.
March 17th—Spring Recess begins........................Saturday.
March 24th—Spring Recess ends........................Saturday.
June 6th—Annual Examinations begin........................Wednesday.
June 12th—Annual Examinations end........................Tuesday.
June 13th—Second Session ends........................Wednesday.

Summer Vacation of Twelve Weeks.

September 5th—First Session begins........................Wednesday.
September 5th— } Examination of Candidates for Admission.. { Wednesday.
September 6th— } { Thursday.
December 21st—Christmas Recess begins........................Friday.

By the munificence of the State, tuition in the University has been made free in all its departments. No charges are made, except an annual contingent fee of ten dollars.

THE NEW BUILDING.

The new building has been enclosed and in part finished with the proceeds ($90,500) of the bonds issued by the City of Lawrence. The building is good looking, substantial, and in excellent condition. Three competent and disinterested engineers, who examined the building at the instance of the Building Committee, pronounce the material and the work to be first class.

With the appropriation of fifty thousand dollars generously made by the Kansas Legislature in February, 1872, the building will be completed in the course of the ensuing summer. The dimensions of this building are as follows: Length, two hundred and forty-six feet; width of centre, ninety eight feet; width of wings, sixty-two feet; height of domes, ninety-five feet. It contains four stories, inclusive of basement; four hundred and fifty thousand cubic feet of space, and sixty thousand square feet of floor surface. There are fifty-four rooms, exclusive of corridors, stair-cases, etc. Commencement Hall, in the centre of the building, is fifty-six by ninety-four feet, and thirty-five feet high. The entire structure is to be devoted to the work of instruction, and will afford ample facilities for laboratory practice by the students in all the branches of science. In this respect it will surpass every other college building in the United States.

KANSAS STATE AGRICULTURAL COLLEGE, MANHATTAN.

THIS IMPORTANT institution, which was noticed in the description of the town of Manhattan, was endowed as follows:

Ninety thousand (90,000) acres of land, obtained by act of Congress of the 2nd of July, 1862, granted to the loyal States, for educational purposes—thirty thousand acres for each Senator and Representative in Congress. This land was located by a commission of faithful men, who visited and inspected in person each quarter section, and every one selected is suitable to make a good farm. It is located principally in Riley, Dickinson, Marshall, Washington and Clay counties, and much of it is near the Kansas Pacific Railway. Hon. I. T. Goodnow, late Superintendent of Public Instruction, is the appointed Agent in charge of its sale. About one-half of the land has been sold, and has already created a fund of over $180,000, bearing interest. About $130,000 of this is in notes of parties who have purchased the land, and is bearing ten per cent. interest. Some $50,000 of the principal that had been paid in, was, by act of Legislature approved March 2nd, 1871, placed in the hands of the Regents to invest, and they have determined to purchase directly of School Boards, School District Bonds legally issued. Thus they can pay the full market price of these bonds directly to the district, and make one educational fund of the State aid another. By payment of the principal the $130,000 will be added to the $50,000, and aid in the erection of school-houses.

The township of Manhattan, in April, 1871, voted $12,000 in bonds for the purchase of additional lands for the College farm; and the Regents have joined with this, a part of the farm development appropriation of 1870, and have purchased three hundred and fifteen acres of land. One hundred and fifty-five acres of this is a beautiful roll adjoining Manhattan town site, a most suitable situation for the development of a great institution.

The Home Farm of the College, now consisting of four hundred and fifteen acres, gives for experiment the three varieties of Kansas soil—high prairie, creek bottom and second bottom. It is nearly all under fence and cultivation. Major F. E. Miller, from the Michigan Agricultural College, has charge of the farm, and will give instruction in practical agriculture. Students are paid for labor upon the farm.

In the orchards of the College farm there are about one thousand apple trees, and as many peach trees, with a full assortment of other fruits. There are nearly three acres of vineyard, and over forty thousand trees in the nursery. With ample means of illustration, E. Gales, an experienced nurseryman, teaches practical Horticulture; this, supplemented by the lectures of Dr. Warder, the veteran pomologist, renders this department of special value.

There are also good facilities for taking care of stock, under the superintendence of Jas. C. Majors, an intelligent English stock-breeder. As soon as the resources of the College will permit, choice animals will be obtained. It is expected that the State will provide ample stock barns and sheds before long.

The College is provided with a good assortment of Philosophical and Chemical Apparatus, sufficient to perform all experiments required in teaching Natural Philosophy and Chemistry. They have over two hundred and fifty pieces, embracing about one hundred and fifty different kinds of instruments. To these, valuable additions are being made from time to time, to supply the increasing wants of the Institution.

The Cabinet, donated by Prof. Mudge, consists of a very extensive variety of minerals and ores, collected by him during a residence of twenty-five years in New England. Many of them are quite rare and valuable. In addition to this, the College possesses a good collection of specimens from various parts of the State, illustrating the geology of Kansas. To these, specimens are constantly being added. This Cabinet is of great value in pursuing the studies of Agriculture, Geology, Mineralogy and kindred Sciences.

The Library has nearly three thousand volumes, and will be increased by yearly accessions.

Skeletons, Models of the Eye, Plates and Diagrams, are provided for the use of the students of Anatomy and Physiology.

FACULTY.

REV. JOSEPH DENNISON, D. D., President, and Professor of History, Political Economy, and Mental and Moral Philosophy.

J. EVARTS PLATT, Professor of Mathematics and Teacher of Vocal Music.

B. F. MUDGE, A. M., Professor of the Natural Sciences.

REV. J. H. Lee, A. M., Professor of Agricultural Classics.

J. S. HOUGHAM, A. M., Professor of Agricultural Chemistry, Mechanic Arts and Commercial Science.

MAJ. FRED. E. MILLER, Professor of Practical Agriculture and Superintendent of the Farm.

———— ————, Professor of Military Science and Tactics.

E. GALE, Instructor in Horticulture and Superintendent of the Nursery.

MARY F. HOVEY, Professor of German and English Literature.

LIZZIE J. WILLIAMS, Teacher of Drawing and Tutor.

HATTIE V. WERDEN, Teacher of Instrumental Music.

LEAVENWORTH STATE NORMAL SCHOOL.

THIS SCHOOL, the design of which is to furnish teachers for the public schools of the State, was opened in the "Morris Building," in Leavenworth City, on the 7th of September, 1870. The building is located in the midst of a beautiful plat of two acres of ground, on the most elevated and commanding position in the city. It is four stories high, besides the large and commodious basement, which is occupied by the janitor, furnaces, etc. The other stories contain rooms sufficient for the practicing departments of all the grades, ten in number, besides the high school. They are furnished with single desks and seats, and have convenient wardrobes, etc., for each room. The building is thoroughly ventilated, and heated throughout by furnaces. The fourth story is finished fourteen feet in the clear, and consists of one large school-room, capable of accommodating, with single seats and desks, one hundred and sixty pupils. Besides this, there are four large recitation rooms. There is also a valuable philosophical apparatus, geological and mineralogical cabinets, and a chemical laboratory, fitted up in the most approved style. Besides these are maps, charts, and globes in every room of said building, suitable for the illustration of the various branches of study of any school. The entire cost of the building and apparatus was not less than eighty thousand dollars. A large building, with fine grounds, known as the "Russell House," has been purchased and furnished neatly by the Board of Education for the accommodation of the ladies of the Normal School. The board is furnished at cost prices, and amounts to about three dollars per week.

The entire expense per annum to young ladies attending the Normal School will not exceed one hundred and twenty dollars. The Board of Visitors for 1870 thus speak of the School in their report:

"The design of the school is set forth in a circular of information issued by its officers in the following language: 'The design of the School is to furnish to the Public Schools of the State thoroughly prepared and competent teachers.' We judge, however, that its founders had their eye more especially upon a part of this educational work—that of fitting teachers for graded and high schools. This aim your Committee would commend, for, although there are not now a great number of fully graded schools in our State, the present growth of the commonwealth will certainly ensure a large demand for such teachers at an early day, and we think this School has before it a wide field of usefulness in this direction. This position should be made emphatic, since such work as a specialty need not at all interfere with the more general work of fitting teachers for the rural schools.

"For this purpose the School is well located. Here its pupils have opportunity to see teaching done by well trained and experienced teachers, and the further advantage of having the *rationale* of this work explained by a competent principal. Thus the pupils not only acquire truth—as they might do in an academy, did such schools exist in our State, or in an ordinary high school—but they also learn by observation and instruction how to divide and adapt the several sciences and '*subjects*' taught to the gradually unfolding minds of youth. And exactly here is the special province of Normal Schools; they are in the true sense—a little ideal probably for our stage of advancement just now—professional schools."

Students who complete any of the courses of the Institution satisfactorily, will receive corresponding diplomas, which will serve as licenses, without further examination, to teach in the public schools of the State.

Faculty.—P. J. Williams, M. A., Superintendent and Professor of Mental and Moral Philosophy; Miss L. F. Allen, Preceptress of Normal School and Teacher of Mathematics and English Grammar; Miss A. L. Morrow, Principal of Practicing School and Teacher in Theory and Object Lessons; Miss C. M. Meak, Form Drawing and Modern Languages.

THE EPISCOPAL FEMALE SEMINARY, TOPEKA.

"The Episcopal Female Seminary of Topeka, Kansas," the only Protestant boarding school of a high order, exclusively for girls, in the State, or in this part of the West, was first opened for pupils in 1861, under the superintendence of the Rev. N. O. Preston, who left in 1864 to take a chair in the State Agricultural College at Manhattan. After a temporary cessation it was re-opened under its present auspices in September, 1865, with seventeen pupils, two teachers, one piano, and only part of its building fit for occupancy, the remainder being still unfinished. Now, its building has been completed, it employs the whole services of five resident teachers of high standing, besides several others a portion of their time, and the last catalogue shows an attendance of one hundred and forty-eight pupils, (a goodly portion being from a distance,) five pianos in use, a library and respectable apparatus furnished, together with the varied appliances of a first-class school. For this gratifying degree of prosperity the friends of the institution are not insensible of their obligations, not only to the kind partiality of a favoring public, but to the blessing of Almighty God.

At the present time it numbers a larger attendance than at any previous period of its history, and from the most intelligent and appreciative portions of the community, and of almost all classes and denominations. Its greatly increasing patronage has rendered the old edifice, originally large and commodious enough, too straitened for its necessities, and accordingly more ample accommodations are being provided.

A much-needed new building, of substantial and tasteful structure, built of stone, seventy-five by one hundred feet, and five stories high, is now carried so far towards completion as to be finished outside. It will be supplied with the latest and most approved appliances, and is located in an elegant square of twenty acres, near the Capitol. The Bishop of the Diocese expects this edifice to be ready for occupancy early this summer. The old building will then be used for an Episcopal Theological Seminary.

In this institution, in Modern Languages and Art Studies—those most important elements of a liberal female education—great advantages are offered.

In Modern Languages special attention is given by the Managers not only to grounding pupils in rules and principles, but to secure the pure native pronunciation and idiom.

Pupils are encouraged to converse in the language they are studying.

The Music department has been especially successful, and each year a new instrument has been added.

Pupils, who desire, can have lessons on the guitar, and also individual instruction in vocal culture and thorough bass, and excellent opportunities are afforded in painting and drawing.

In short, no effort is spared to make these departments of the course all that the Managers promise, and that their patrons can desire. But they wish above all things, "to make the ornamental studies truly ornamental," by making them the comely embellishments of a sound and substantial education. They should be the graceful leaves of a capital crowning the pillar of knowledge and thought. It is a truth that needs greatly to be inculcated here in the West, where so many circumstances tend to hurry us into superficial ways, that "no shallow embellishments can render an unfurnished mind truly accomplished, or make a life, untempered with the high dictates of truth and virtue, truly beautiful."

The varied advantages of this Institution may be secured at a cost, per annum, (for board, washing, etc., with all ordinary tuitions and one extra each session) of $300.

FACULTY.

Rev. J. N. Lee, A. M., Principal.
Mrs. R. N. Baldwin, Vice-Principal.
Miss Elizabeth Bush, Preceptress.
Miss Matilda Phillips, Instrumental Music.
Miss Marguerette A. Thurston, Assistant in English Department.
Miss Alice McGurn, Vocal Music and Painting.
Miss Josephine E. McGrew, Primary Department.
Prof. M. A. Pond, Penmanship.
Mrs. J. N. Lee, Teacher of French, and Librarian.
Miss Eliza M. Hamilton, Matron.

WASHBURN COLLEGE, TOPEKA.

This Institution was incorporated A. D. 1865, under the general auspices of the Congregational Churches of the State. It has a permanent site of one hundred and sixty acres half a mile southwest of the city limits. The permanent endowment amounts already to fifty-five thousand dollars, the whole property being estimated at one hundred and fifty thousand dollars. The Trustees aim to secure exact and thorough scholarship, and the courses of study are on the most approved plan, and accessible to both sexes.

FACULTY.

Rev. H. Q. **Butterfield**, M. A., President and Professor of Mental and Moral Philosophy;

John B. Dunbar, M. A., Professor of the Greek and Latin Languages;

George C. Merrill, M. A., Professor of Mathematics;

Mrs. **Mary E. Carpenter**, Principal of the Ladies' Department.

THE SEMINARY OF ASSUMPTION, TOPEKA.

Was founded by Father Defourc, by direction of the Catholic Bishop of Kansas, in September, 1866. It now has sixty students, forty of them boarding in the Institution. It has already ordained fourteen priests from among its scholars. There are this year, four Rhetoric, and five in the higher classes.

The Board of Directors is under the Presidency of the Bishop of the Diocese of Kansas, and the property of the Seminary is valued at fourteen thousand dollars.

KANSAS BLIND ASYLUM.

The Kansas Institution for the Education of the Blind is located one mile west of Wyandotte, on a high roll of land commanding a fine view. The grounds consist of ten acres of land, substantially fenced—four acres being cultivated as a garden, while the remainder is laid out and ornamented with shade trees and evergreens. The building, erected three years ago, is a handsome brick structure, costing about twenty thousand dollars. It consists of two stories with a basement, and is heated with a furnace. The school has been in progress three years, and at the present time is full, containing twenty pupils.

It is the purpose of the State to furnish in this Institution as good an education as is afforded by the common schools of the State. For this purpose it has opened a Literary Department, in which pupils are carried through all the ordinary branches taught in public schools. The two-line-dot, or Wait system, of printing has been adopted, in accordance with the recommendation of the Convention of Superintendents of Blind Asylums held last year in Indianapolis. The Institution prints and binds its own books, as no books are published as yet in this system of printing.

The course of instruction also embraces a Department of Vocal and Instrumental Music, in which all the pupils receive instruction on the piano, organ, violin, guitar, and other stringed instruments. The blind excel in this department, many of them becoming fine musicians.

There is also a Department of Needle and Fancy Work for the girls, and a Broom Factory for the boys, connected with the Institution, where they are trained to work in these skilled industries and enabled to become useful in the world. The brooms manufactured at this Asylum find a ready market throughout Kansas and Missouri, and for substantial construction and beauty of finish are not excelled by the products of any other factory, East or West.

The Institution is under excellent discipline—mild but firm—all the inmates being regarded as members of one family, where they receive the sunny and healthful influences of a christian home.

Prof. John D. Parker, formerly of Washburn College, has recently been appointed Superintendent of this Institution, and brings to his position a large experience in teaching in our higher institutions of learning, and a well-earned reputation as an educator.

The Institution is organized at present as follows:

BOARD OF TRUSTEES:

S. D. MACDONALD, WM. LARIMER, FRED. SPECK, M. D.

SUPERINTENDENT:

JOHN D. PARKER, Ph. D.

MATRON:

MRS. N. A. PARKER.

TEACHERS IN LITERARY DEPARTMENT:

MISS NEVADA DEWEY, MISS JENNIE SLAVEN.

TEACHER IN MUSICAL DEPARTMENT:

MISS LIZZIE BINGER.

SUPERINTENDENT OF BROOM FACTORY:

JOHN BINGER.

The Institution receives pupils from nine to twenty-one years of age, and furnishes them board, room rent, and tuition free of charge.

KANSAS ACADEMY OF SCIENCE.

THE Kansas Academy of Science was organized in 1868, under the name of the Kansas Natural History Society. The unexpected success of the young Society induced a desire in the minds of many of the leading scientific men of the State to have its scope enlarged, so as to embrace every line of scientific observation and exploration. At the fourth annual meeting at Leavenworth, in 1871, the Kansas Natural History Society was enlarged in its scope, and its name changed into the Kansas Academy of Science. This organization is fast growing in importance and influence as a State institution. Several papers, based on original investigation, of great value to the scientific interests of the State, have already been read before the Society. A paper on the plants of Kansas, describes about six hundred species, and another contemplates identifying and describing every native plant of Kansas. A paper on the birds of Kansas, describes nearly two hundred species. A paper on the fishes of the Kansas River, as observed at Lawrence, describes twenty-seven species. A paper on the coals of Kansas, compared with other Western coals, aims to give a complete qualitative and quantative analysis of Kansas coals. Something is being done in determining the climate of Kansas, by ascertaining at various points of the State, the direction and force of the winds, the mean annual temperature, the occurrence of early and late frosts, the mean cloudiness of the sky, the mean annual rain fall and its distribution through the months of the year, etc. One of our geologists, under the auspices of the Society, has performed a hazardous work, in exploring the western portion of Kansas, which had remained, until the time of his researches, almost a *terra incognita* to science.

The Academy is already beginning to make some collections in Natural History at three points in the State, viz: The State University, at Lawrence; the State Agricultural College, at Manhattan, and the Library Association at Leavenworth. Prof. John D. Parker, the founder of the Society, has placed his private cabinet on permanent deposit with the Society, in the University building at Lawrence. He intends to make this the nucleus of a much larger collection, which he hopes to gather in coming years.

The Academy is organized at present as follows:

OFFICERS.

GEN. JOHN FRASER	President.
B. F. MUDGE, ROBT. J. BROWN	Vice-Presidents.
JOHN D. PARKER	Secretary.
FRANK H. SNOW	Treasurer.
B. F. MUDGE, F. H. SNOW,	Curators.

COMMISSIONERS.

B. F. MUDGE, A. M.	Geology.
F. H. SNOW, A. M	Ornithology.
J. H. CARRUTH, A. M	Botany.
JOHN FRASER, A. M	Astronomy.
F. W. BARDWELL, B. S	Engineering.
WM. H. SAUNDERS, M. D	Chemistry.
JOHN WHERRELL	Mineralogy.
J. E. STIMPSON	Physics.
J. H. ROBINSON, A. M	Philology.
JOHN D. PARKER, PH. D	Meteorology.

Specimens and publications are solicited by this Society, of every description.

SURVEY OF RAILWAY LANDS.

GOVERNMENT LANDS are surveyed under the direction of the Commissioner of the General Land Office, Washington, District of Columbia. The United States is divided into Surveying Districts, each in charge of a Surveyor General. The Surveyor General for Kansas is Hon. C. W. Babcock, of Lawrence; and for Colorado, Hon. W. H. Lessig.

All the public lands in the United States are now surveyed under the same system, by which they are divided into tracts, six miles square, called townships, and each township is subdivided into tracts, one mile square, called sections. North and south and east and west lines are run by Government Surveyors, who set stones or stakes to mark the corners of the various divisions. The details of the mode of survey are thus very correctly given in "Hutchinson's Kansas": "As all the north and south township and section lines are run upon the true meridian—that is, each line, if extended, would pass through the north and south poles—it follows that all these north and south lines converge, or approach each other toward the north; from this the reader will see that neither the townships nor sections can be precisely square, as the line bounding the north side of each tract must be a trifle shorter than the line bounding the south side of the same tract. Besides this, it is impracticable, if not impossible, for the surveyors to measure the lines with perfect accuracy."

In commencing the surveys of each district, base lines and principal meridians are established, the former running east and west, the latter north and south.

To counteract the error that would otherwise result from the convergency of lines, as above described, and to avert errors arising from inaccuracy of measurement, other lines are established, running parallel to the base lines, called standard parallels. In Kansas, and always if the townships are numbered south from any base line, these parallels are thirty miles apart, but in Nebraska, or wherever the townships number north from the base lines, the parallels are twenty-four miles apart. Upon the parallels the convergency, or tendency to run together of the north and south township and section lines, is corrected. On the parallels is observable a jog or offset in the north and south lines, part of the stones or stakes marking the corners of the townships and sections north of the standard, and part marking the corners and sections south of the parallel.

For convenience in surveying, guide meridians are also established, running north and south, forty-eight miles apart.

From the point where the base line and principal meridian cross each other, the townships are numbered north and south, and the ranges of townships east and west.

Any number or series of contiguous townships situate north and south of each other, or in other words, any north and south row of townships, constitute a range. The ranges are designated as range No. — east (of the principal meridian,) or as range No. — west (of the principal meridian). No two townships in any one range are numbered alike. In any one row of townships running east and west, all the townships are numbered alike, but are distinguished from each other by designating the number of the range in which any particular township is situated, and whether the township is east or west (of the meridian).

A glance at the map will show a base line on the northern boundary of Kansas, and the sixth principal meridian crossing it between Saline and Dickinson counties. To describe a township we say it is, for instance, township No. 11, south of range No. 11 west, meaning south of the base line and west of the meridian. If north of the base or east of the meridian it would be described accordingly. The township above described is the northeast corner of Russell county, Kansas.

Upon the western portion of our map is an enlarged township, which is sub-divided into sections, there being thirty-six sections in each township, which are numbered from the northeast corner of each township. In subdividing a township into sections, the surveyors commence at the southwest corner of the southeast section, and run a half mile north, and establish a quarter-section corner, then half a mile further north and establish a section corner, then due east, as it is supposed this course will strike the northeast corner of section thirty-six, and which corner was set in running the exterior lines of the township. This last line is called a "random" line, and at a half mile distant a "random" corner is set, whence the surveyors proceed to the northeast section corner aforesaid. If they do not strike the corner, they measure the "falling," or distance either north or south of the said corner at which they intersect the township lines. They then go back to the northwest corner of section thirty-six, correcting the "random" quarter, if it was wrongly established, by moving it north or south, as the case may be, one-half the measurement of the aforesaid "falling." From the last named section corner they proceed northward a mile, and then eastward a mile, and return, establishing the section and quarter section corners as before. But any excess or deficiency in measurements is thrown into the last half mile before reaching the north line of the township.

They then return to a point one mile west of the point of beginning, that is, to the southwest corner of section 35, and repeat the process by which the first tier of sections was laid off. The random east lines are in each case run due east one mile, to the previously established section corner.

A section is considered to be a mile square, and is always reckoned as containing 640 acres—each half, or quarter, a proportional amount. Forty acres, or a tract eighty rods (quarter of a mile) square, is the lowest subdivision made by the Government in disposing of its lands, but the corners of forty acre tracts are not marked by the surveyor. These corners are regarded by law as points intermediate between the half mile or quarter section corners. In fractional quarter sections the excess or deficiency is thrown into the west forties, if on the west side of a township, and into the north forties if on the north side of a township.

Stakes or stones are set at each township corner, at each section corner, and on section lines, half way between the sectional corner stones. The latter are called quarter stones, for they mark the corners of the quarter sections, but no corners are established in the centre of the sections. The only exception to this rule about quarter section stakes or stones is, they are not required to be established on the west boundary of the western tier of sections in a township, nor on the north boundary of the northern tier of sections in a township south of and bordering on a standard parallel or base line. This exception applies only to such surveys as are made subsequently to the instructions of the General Land Office of June 1st, 1864.

HOW TO ACQUIRE GOVERNMENT LANDS IN RAILWAY LIMITS.

Title to Government lands can only be obtained through the Register and Receiver of the United States District Land Offices. There is one at

Topeka and Salina, in Kansas, and one in Denver, Colorado. They act under direction of the Commissioner of the General Land Office in Washington.

Minimum Lands are those which are not sold for less than one dollar and twenty-five cents per acre. *Double Minimum Lands* are those which are not sold for less than two dollars and fifty cents an acre. The odd numbered sections only are granted to the Kansas Pacific Railway, and the even numbered sections are doubled in price, becoming double minimum lands.

PRE-EMPTION.—Every head of a family, or widow, or single man or woman, over twenty-one years of age, being a citizen, or having filed a declaration of intention to become a citizen, can pre-empt one hundred and sixty acres of either minimum or double minimum land by paying therefor and complying with certain regulations. The (qualified) party who makes the first settlement upon any public land by improving the same is entitled to the right of pre-emption, if the pre-emption laws are subsequently complied with, including filing upon the same. His right dates from the time he performed the first work on the land.

A pre-emptor must file his declaratory statement within thirty days of settlement, and within one year from the date of such filing the land must be paid for.

A pre-emptor cannot pay for land until he has actually resided upon the same for a period of at least six months, and before payment must swear or affirm:

"That I have never had the benefit of any right of pre-emption under this act; that I am not the owner of three hundred and twenty acres of land in any State or Territory of the United States, nor have I settled upon and improved said land to sell the same on speculation, but in good faith to appropriate it to my own exclusive use or benefit; and that I have not, directly or indirectly, made any agreement or contract, in any way or manner, with any person or persons whomsoever, by which the title which I may acquire from the Government of the United States should inure, in whole or in part, to the benefit of any person except myself."

This affidavit must be supported by at least one witness, who must appear with the pre-emptor before the district land officers in person. The settler can then secure the land by paying in cash, or by filing a warrant, or Agricultural Scrip duly assigned.

If a pre-emptor dies before perfecting the title, his or her rights descend to the "heirs." The executor or administrator may make proof of occupation, and pay for the land, and the patent will issue to the heirs of the deceased settler.

HOMESTEADING.—The Homestead Laws permit any person to acquire by occupation and the payment of commissions and fees hereafter noted, one hundred and sixty acres of surveyed minimum land or eighty acres of double minimum land. Under this law the settler may file on the land he desires to obtain, and that filing holds good for six months, during which time the settler must take possession of the land by occupation and improvement. Affidavit must be made that he or she is the head of a family, or is twenty-one years of age, and that such application is made for his or her exclusive use and benefit, and that said entry is made for the purpose of actual settlement and cultivation, and not either directly or indirectly for the use or benefit of any other person or persons whomsoever, and that the applicant has not heretofore had the benefit of the Homestead Act. If the applicant is actually upon the land, and cannot by reason of distance, bodily infirmity, or other good cause, personally go to the district land office, the affidavit may be made before the clerk of the court for the county within which the land is situated.

Officers, soldiers and sailors who have served ninety days, and remained loyal, may take under homestead laws, one hundred and sixty acres instead of eighty acres of double minimum land, but no other distinctions whatever are made between these and any other persons. The applicant must make oath as to the company and regiment in which he served.

Within seven years from the date of the duplicate of entry given to the settler by the receiver at the district land office, the settler must personally appear at said office and make affidavit that he or she has resided upon or cultivated the same for the term of five years immediately succeeding the time of filing the affidavit of entry, and that no part of the land is alienated. The five years of occupation date, not from the date of entry, but from the date of settlement. The affidavit of settlement must be corroborated by two credible witnesses. If by reason of physical disability, distance, or good cause, they cannot accompany the settler to the district land office, their testimony may be taken before any officer authorized to administer oaths and who uses a seal. He must certify to the credibility and responsibility of the witnesses, and state the reasons of their inability to attend at the land office. The register and receiver endorse their opinion upon the testimony and affidavit, and transmit them to the General Land Office at Washington. If the proceedings are satisfactory to them they also give a certificate to the settler.

If a homestead settler dies, the widow, or if she die, the heirs, may continue the settlement and cultivation and obtain title. If both parents die, leaving a child or children under twenty-one years of age, the homestead may legally be sold by the administrator.

Homesteads are not liable for any debt or debts contracted prior to the issuing of the patent or deed therefor from the Government.

The above is compiled from Hutchinson's article on the subject, in his work on Kansas.

BOUNTIES FOR TREE PLANTING AND HEDGING.

THE FOLLOWING act was approved in the Kansas Legislature, March 2nd, and took effect on the 31st of October, 1869:

SECTION 1. Every person planting one acre or more of prairie land within ten years after the passage of this act, with any kind of forest trees, except black locust, and successfully growing and cultivating the same for three years; and every person planting, protecting and cultivating for three years one-half mile or more of forest trees, along any public highway, said trees to be planted so as to stand, at the end of three years, not more than one rod apart, shall be entitled to receive for twenty-five years, commencing three years after said line or grove of trees has been planted, an annual bounty of two dollars per acre, for each acre so planted, and two dollars for each half mile so planted, to be paid out of the treasury of the county in which said grove or line of trees is cultivated or kept alive and in a growing condition.

The second section provides that any person wishing to avail himself of the provisions of this section, shall file with the County Clerk, within three years after the trees are planted, a plat of the grove or line of trees, showing the section or piece of land where the same are situated, attested by his own oath and the affidavit of two householders, having a knowledge of the facts, that the provisions of the section have been complied with. The County Commissioners are then required to issue warrants on the County Treasurer for the bounty provided for.

Section three provides that the affidavit of the claimant, and at least two householders, shall be filed with the County Clerk each year, showing the growth and condition of the trees, when warrants will be drawn on the County Treasurer for the bounty of that year.

An act was also passed in 1867 to encourage the growing of hedges and building of stone fences. Section two of that act provides that any person planting an Osage or Hawthorn fence, or who shall build of stone a fence of the height of four and one-half feet, around any field, within ten years from the passage of this act, and successfully growing and cultivating the same, or keeping up said fence until it successfully resists stock, shall receive an annual bounty of two dollars for every forty rods so planted and cultivated, or built and kept up, the bounty to commence as soon as said fence will entirely resist cattle, and to continue for eight years thereafter; said bounty to be paid from the county treasury of the county in which said fence may be situated.

The following is a copy of a circular issued by the Kansas Pacific Railway Company on the first of January, 1872:

For the best interest of all concerned, and to encourage the fencing of all farm lands contiguous to the Railroad—

1. The Railway Company will, upon application, furnish at the nearest station, during the proper season for planting, Osage Orange Plants in sufficient quantities to set out a hedge on the right of way line of each cultivated farm, and will, when the hedge is grown and in condition to turn stock, as ascertained by actual examination of a skilled inspector, pay the proprietor, or his assigns, the sum of thirty-five cents a rod.

2. The Railway Company will, about the time the hedge is ready to turn out to stock, fence up, at its own expense, such short gaps as must be necessarily left where there is no soil to grow a hedge.

3. The proprietor, or tenant, of the land shall prepare the same for setting out the hedge, and the plants will not be furnished until the inspector has examined it and reported it to be in good condition.

4. All setting out, protecting, cultivation and care of the hedge shall be performed by the proprietor or tenant, and the above mentioned payment of thirty-five cents per rod shall only be made when it is a continuous, efficient hedge, capable of turning stock of all kinds, save at those points where there no soil, as above provided. The intent of this proposition being to throw the whole care of the growing hedge upon the farmer, and to make it to his interest to do the work well.

5. In order to prevent the entire failure of any piece of hedge once started, he Company reserves the right of taking charge of any portion of the same which may be abandoned or improperly taken care of by the farmer; in which case he shall be entitled to no compensation for setting out or cultivating the same; but the Company shall only be entitled to take possession of the same

after three disinterested fence-viewers, selected from among neighboring farmers, shall have decided that the hedge is not receiving proper attention.

6. As experienced hedge growers in Kansas estimate the whole cost of preparing the ground, setting out and raising a hedge, the plants being furnished, at from twenty to twenty-five cents per rod, it is hoped that the higher price here offered will induce proprietors to inclose and cultivate the lands near the Railroad so as to avail themselves of this proposal.

7. Any benefits or bounties provided by the laws of the State of Kansas, for growing hedges, will be relinquished by the Company to the farmers.

8. Forms of contract, made assignable upon the sale or transfer of the land, have been prepared, embodying the above conditions, and will be filled out upon application being made in writing upon the form herewith. Blanks may be obtained from the Section Foremen, or from the Station Agents.

9. As it is very desirable that the Company should know at an early day, how many plants to provide for next spring, the farmers who may wish to avail themselves of this offer, are earnestly desired to fill out and forward their applications without delay. Make out a separate application for each piece of land, even if owned by the same party, so as to avoid the making out of new contracts, should you hereafter sell a portion of your land.

EDM'D S. BOWEN, General Superintendent.

The following is the form of application to be filled up by the party desirous of hedging his land:

GENERAL SUPERINTENDENT KANSAS PACIFIC RAILWAY.

Sir: Being desirous of Hedging my land, under your proposal of December 8th, 1871, I hereby apply for a contract with the Kansas Pacific Railway Company.

My farm is on the------------quarter of Section No----, Township----, Range----, County of------------; and will require------------rods of Hedge on the North, and------------rods on the South side of the Railroad.

I shall have the ground prepared to set out------------rods next spring, and will require plants for that amount.

Name,---------------------------

Post Office,---------------------

Date,-----------

With reference to the foregoing, a description of the Osage Orange as a tree, will be useful, and as Col. Elliott has given it extended notice in his "Forest Trees of Kansas," the author has deemed it well to give his remarks in full. He writes as follows:

OSAGE ORANGE.

"*Maclura Aurantiaca.*—A small tree, with straggling branches, says Darby, in his Southern Botany, named in honor of William Maclure. We ought to call it, in modern speech, "Maclura," and thus use a shorter name. A writer in the reports of Department of Agriculture, speaks of 'Osage Orange Thorn,' as if even two parts of the name were not enough. I forget who Wm. Maclure was, but I want to perpetuate him, as we can save time by so doing.

"The Maclura is to be tried on the plains as a tree, not simply as a hedge plant. If it will live in Kansas, subjected to the crowding, clipping, and slashing suffered in a hedge, it ought to do well as a tree. Prof. J. G. Cooper, in a report to the Smithsonian Institute, says it is native in Jasper county, Southwest Missouri; but it bears the cold of winter much further north. The young plants differ in their ability to endure cold, some being more tender than others. They vary, as a lot of seedling grape vines vary. As a general rule the winter climate of Kansas is indorsed. For tree growth, the question of summer climate will come in. This I shall test under severe trial.

"The Indians used the wood for bows, and the Indian name signified bow-wood, which the French of Louisiana translated into *Bois d'Arc.* Osage Orange is a name given by American settlers, suggested by the fruit, which is like a large, rough-skinned orange, though not edible. The seeds are washed out from the pulp of the orange. In 1841, Wm. Kenrick, as quoted in Department of Agricultural Reports, wrote as follows:

"'A native of Arkansas, where it rises in beautiful proportion to the height of sixty feet, and has been pronounced one of the most beautiful of our native trees. This wood is, perhaps, the most durable in the world, and for ship building is esteemed preferable to live oak. It is valuable for furniture, as it receives the finest polish, and it yields a yellow dye. It is remarkably tough, strong and elastic, and preferred by the Indians to all other wood for bows.'"

"A peculiarity of the wood of the Maclura is said to be, that it seasons without shrinking. Even small trees would be very useful as timber on a farm. But how fast or how high this tree would grow in Kansas, under tree treatment, has not yet been established, for lack of trial and time. In lists of lawn trees, by landscape gardeners, the Maclura is generally given a place, on account of the beauty of its glossy foliage; but I have not learned that it has ever been tried as a forest tree, with careful cultivation. Planted three-by-three feet, in good soil, and the ground kept in proper order, it is likely that it would surprise us by its rapid growth. I remember trees twenty feet high, with fruit on them, at the Sigerson nurseries, near St. Louis, about eighteen years ago, which had been but a few years planted. When we consider the remarkable vitality of this tree, under hedge treatment, the encouragement is great to give it a chance in a tree plantation. In Illinois, the hedges have run up to twenty-five or thirty feet, apparently, as seen from the car windows, in cases where trimming has been neglected.

"One great advantage of the Maclura is cheapness, either in seed or plants. Seedlings for hedges can be had in the large way, at two dollars per thousand or less. Plants for forest use, ought, perhaps, to be grown with more room in the seed-bed. Many of the hedge-plants are delicate from over-crowding.

"The consumption of Osage Orange seed is on the increase, and prices may go up somewhat. The growth of trees to produce seed is not in proportion to its consumption. Various trees and shrubs have been tried for hedges—the Honey Locust, Cherokee Rose, etc., but nothing has stood the test equally with the Osage Orange. It may be regarded as the great fence plant of the continent; and millions ought to be planted in Kansas for this use. But its heroic struggles in the hedge row to rise to the tree condition, suggest very forcibly its use as a wind-break and timber tree. Farmers, if they will take the time and trouble, may grow their own plants. They may even plant the seed in hills, where the trees are to stand, and raise the plants in their crop of corn, having the stalks for protection the first winter. If the hills are four-by-four feet, they may have corn hills intermediate in the rows, the second year, and thus pay themselves for attending to the cultivation of their young forest.

"A very large proportion of the seed in a pound or bushel, will grow. S. W. Arnold, of Illinois, in an article published in the State Agricultural report of 1859-60, says: 'A pound of seed will produce from two to five thousand plants.' But it may, perhaps, be as well for the farmer to buy his plants, if there is a nursery near him, and he has the money to pay for them.

"This tree is so easily propagated, and so cheap, that I have thought it worthy of this extended notice. By all means let it be tried in all parts of the State, as a tree. Any one making a hedge may easily place a few plants where they may take the tree form."

GEOLOGY OF THE KANSAS PACIFIC RAILWAY.

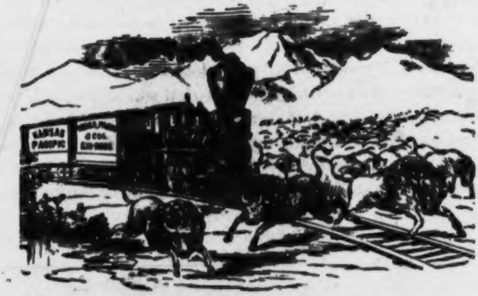
IN ANSWER to some questions on the above subject, Prof. Mudge, of the State Agricultural College, makes the following remarks: The Eastern portion of Kansas is covered by the coal measures, and is so well-known that no description is necessary. But beginning near Abilene, and extending westward as far as Ellsworth, we have a cretaceous deposit, underlaid by red sandstone. The soil is mixed freely with lime and vegetable mold, and is rich and fertile. The underlying rock gives an excellent drainage, which makes it even more favorable for fruit than the Eastern part of the State. This is particularly favorable for pear culture, which requires a porous subsoil. The excellent quality of the soil cannot be better illustrated than by the statement that Saline county has taken the first prize for vegetables at the State Fair.

The sandstone of this region affords a good building material, being easily wrought and durable. Extensive beds of gypsum are found, the heaviest being in Saline and Dickinson counties. The value of gypsum as a fertilizer, and particularly as a retainer of moisture, is not yet appreciated by our farmers; but its abundant supply (sometimes the bed is fifteen feet in thickness,) will, ere many years have elapsed, prove one of the most important of our natural resources. It is a very pure article, and has already been used in the manufacture of excellent Plaster of Paris.

From Ellsworth to the western line of the State, limestone is the prevailing rock. It occurs in extensive beds, sometimes fifty feet in thickness. It burns to a good quick lime. It is somewhat soft, but enough of a compact character is found to furnish an abundant building material. It can be cut, sawn or planed, with ordinary joiner's tools, and usually becomes firmer on exposure to the atmosphere. It is of various shades of buff, white and pink, and is at the same time a cheap and ornamental building stone. At Wallace and other Government posts it has been extensively used. It is also valuable as a fencing material, and for all uses to which stone is applied.

The disintegration of this limestone with its accompanying shales, makes a rich, fertile soil, even on the highest prairies. The subsoil is also supplied with lime, potash, and some other ingredients favorable to vegetation. The surface is covered with the short, dense buffalo grass, furnishing an abundance of nutritious food for cattle, which is not injured by wintry frosts. Its value as a pasturage can be seen from the fact that it is traversed by immense herds of buffalo, counted by hundreds of thousands. Many of these remain in Kansas all winter. By the aid of man, domestic cattle can thrive in even greater abundance. We have dug into the rich soil of the high prairie to the depth of two feet, and found the grass roots to that depth. Where these roots penetrate the firm soil so far, domestic plants, aided by the subsoil plow, will do equally well.

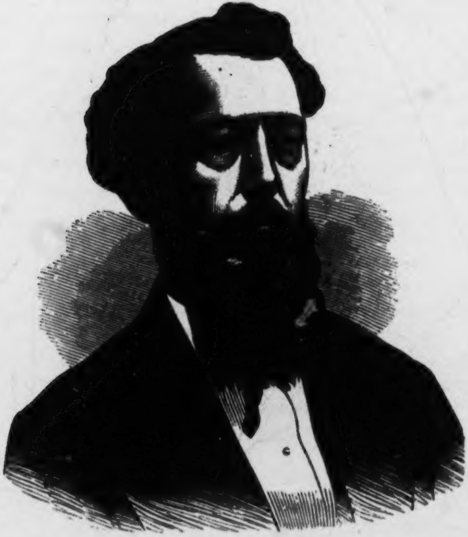
Of the richness of the soil in Western Kansas, there can be no question.



INDUCEMENTS TO TOURISTS AND HEALTH-SEEKERS.

SPORTING ITEMS.

FEW LINES of Railway in the world offer such facilities for the sportsman and hunter as the Kansas Pacific. Where else in the world can a man recline in the luxuriously cushioned seat of a Pullman Palace car, gliding over the smoothest of tracks, and look out on immense herds of that Monarch of the Plains—the Buffalo—some clumsily cantering along within one hundred yards of the train, and others still further off, watching it with a sort of lazy, stupid wonder. Not only buffalo, but herds of antelope, and the noble elk, are to be seen by passengers on the Kansas Pacific trains. It is by no means an unusual thing for buffalo to be killed from the cars, and if near enough to the track, they sometimes stop the train, take off the hind-quarters and hump, and perhaps the head of the quarry, and then proceed, having afforded a never-to-be-forgotten pleasure to travelers from the



Edw. G. Bowen,

General Superintendent K. P. R. W.

East, who have thus got their first look at the great North American Bison. This occurs frequently during the summer and early fall; in the winter they travel southward, leaving behind the aged and infirm, which form in little herds of twenty to thirty, and may be seen along the line the winter through. The buffalo range now extends westward from about Ellis station. Though existing apparently in countless myriads, their numbers are fast diminishing, and it is to be feared that the day is not far distant when the buffalo shall exist only in stories of the past. Much, however, might be done to prevent this. Laws have been passed by the Legislature of Kansas protecting insectivorous birds, and such insignificant game as quail, prairie chickens, etc.; why not preserve the "noblest game of them all?" Easily domesticated, easily fed, and affording excellent meat—is it not a sin that they should be wantonly butchered, as they are now? Hundreds are annually slain for sport (?), their tongues cut out, and the immense carcasses left to rot in the summer sun; thousands are killed merely for their hides, and thousands more wounded and disabled by thoughtless excursionists who fire into them from the trains. "Still hunting" buffalo is, after the first two or three days at it, but tame sport, with but just enough spice of danger in it to make it interesting; they are easily approached by creeping on them up-wind, and will always run from you, unless too closely approached when wounded. But with a good horse between your knees, and a long navy revolver in your grasp, to single out your bull, and then dash across the velvet sward and into the middle of the herd, and bring down your quarry, has the ring of true sport about it, and requires a clear eye and steady nerve.

It is a very beautiful sight to see these animals about the time they are migrating southward, surrounding you and extending as far as the distant horizon, in dark masses, quietly journeying along to their winter quarters on the Arkansas River. They have been known to travel in such dense herds that they rubbed against the telegraph poles on the line, till they shook an insulator off, causing the wire to sag, and carried off about half a mile of it on their horns; and frequently during the migratory season the trains have to stop two or three times in a trip, to let them cross the line in front of the engine. A needle-gun or a Wesley Richards rifle are the best to use for buffalo shooting, on account of carrying a heavy ball; they are very tenacious of life, and as many as twenty-five bullets have been known to hit one before bringing him down—in fact, a shot in the heart or kidneys seems to be the only one that proves directly fatal. Parties may get off at almost any station beyond Ellis (three hundred and fourteen miles, or fourteen hours' run, from Kansas City,) and get good shooting at these noble beasts. In the northern part of Russell, Ellis and Trego counties are found elk, black-tailed deer, antelope, and wild turkeys in abundance.

To the sportsman whose chief delight is in his breech-loader and his pointers or setters, the very finest sport may be had by getting off at any of the stations along the line from Kansas City to Salina. The whole of that country swarms with quail and prairie chickens. The abundance of quail may be estimated by the fact that they are sold in the markets at one dollar to one dollar and a half per dozen, and prairie chickens at two dollars and a half per dozen. In the season a good shot can bag his fifteen to twenty brace of quail per diem with ease. An eleven or twelve-bore central fire breech-loader is about the most useful gun for this work, and cartridge shells may be had at Kansas City and Lawrence at one dollar and fifty cents per hundred for Ely's third quality. All kinds of ammunition may be had at such prices that it would not pay sportsmen coming from a distance to bring it with them, excepting only the shells, which may be had better and cheaper in the East. A good pointer is, on the whole, the best dog for quail and prairie chicken work, as the abundance of burrs which cling to the long hair of the setter, render it extremely annoying and painful—so much so as frequently to drive them from the field. The best dress to wear is a pair of lace-up, thick-soled boots or shoes, leather leggins, cord knee-breeches, and a canvass or flax shooting coat with large pockets. The season for quail shooting is between the first of October and first of March; prairie chicken between the first of August and first of March. The Kansas River, which runs parallel with the line of Railway for upwards of three hundred miles, with its tributary streams, marshes and lakes, abounds with all kind of water fowl, viz: Swans, Pelicans, Canada and Brant Geese, Cranes, Bitterns, Mallard, Gadwall, Red-head and Blue-bill Ducks, Spoon-bill, Teal, Widgeon, Pintail, English or Wilson's Snipe, and a numerous variety of the genus Sand-piper or Plover, of which latter are found on the up-lands, countless flocks of the Golden Plover, the Prairie or Up-land Plover and Curlew—these last chiefly in the spring. The geese sit on the sand-bars of the river during the day, and at night repair to the adjacent corn-fields to feed. For duck shooting, the principal requirements are—a heavy ten-bore gun and a good retriever. India-rubber thigh boots are to be had at any of the principal towns on the line as cheaply as in the East. In the Rocky Mountains, not many miles from Denver, (the terminus of the line,) the sportsman may have good shooting at big game, such as the Grizzly and Cinnamon Bear, the Ibex, or Rocky Mountain Sheep, Black-tailed Deer, Wolves and Wild Cats, while the beautiful mountain streams swarm with that prince of game fish—the Speckled Trout. Such are the inducements held out by the Kansas Pacific Railway to sons of the trigger.

The rivers along the Railway are well stocked with fish, but not such as are usually caught with rod and line. Chief among these is the Catfish, which ranges in weight from ten to one hundred and fifty pounds, and it is said that one was caught in the Kansas River at Topeka, in 1869; which actually weighed one hundred and seventy pounds. These are caught in nets or with stout lines and large hooks, such as are used for deep sea fishing. Next in order is the Buffalo fish, which is very fine eating, Sun-fish and Perch. But for the angler, Denver and its vicinity afford the ne plus ultra of enjoyment.

Catalogue of the Birds of Kansas.

WRITTEN FOR WESTON'S GUIDE BY

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THE FOLLOWING list of birds is based upon the personal observations of the author during a residence of six years in Kansas. Valuable assistance has been rendered by a few friends of ornithology in Kansas, among whom special mention should be made of Edwin A. Popenoe, of Topeka, and Geo. F. Gaumer and Nelson J. Stephens, of Lawrence. Acknowledgments are also due to T. M. Brewer, M. D., of Boston, for important additions. The notes in quotation marks were furnished by him. The list already contains two hundred and seventy-seven species, representing thirty-nine families, and is being constantly enlarged. The entire number of species will undoubtedly reach three hundred. In this catalogue birds known to breed in Kansas are marked with an asterisk (*).

This edition contains important additions by Prof. S. F. Baird, of the Smithsonian Institution, and Prof. J. A. Allen, of the Museum of Comparative Zoology, at Cambridge, whose names are appended to their respective contributions. The author is also indebted to these gentlemen for valuable notes upon some of the birds enumerated.

Vulturidæ.—Vultures.

1.*—Cathartes aura. Turkey Buzzard. Common, and comparatively tame, approaching quite near to farm houses and towns.

Falconidæ.—Hawks and Eagles.

2.*--Falco anatum. Duck Hawk. Not common. Found breeding near Fort Hays, by J. A. Allen.

3. --Hypotriorchis columbarius. Pigeon Hawk. Common.

4. --Hypotriorchis Richardsonii. Richardson's Merlin. Baird.

5. --Falco polyagrus. Prairie Falcon. Rare in winter.

6.*--Tinnunculus sparverius. Sparrow Hawk. Very common.

7. --Astur atricapillus. The Goshawk. Not common. A fine adult specimen in the collection of Dr. W. H. Saunders, of Lawrence.

8. --Accipiter Cooperii. Cooper's Hawk. Not common.

9. --Accipiter fuscus. Sharp-shinned Hawk.

10. --Buteo Swainsoni. Swainson's Hawk. Two undoubted specimens of this "far western" bird are in my collection. They were collected within five miles of Lawrence.

10a.--Buteo insignatus. Brown Hawk. Now considered to be the same as the preceding.

11. --Buteo Harlani. Black Warrior. A pair of these rare birds appeared within one mile of Lawrence, in October, 1871. The male, an adult, was captured by Nelson J. Stephens.

12.*--Buteo borealis. Red-tailed Hawk. Common in the timber.

12a.--Buteo montanus. Western Red-tail. A single specimen was taken in December, 1871, by William Osburn, of Lawrence. Generally considered to be the same as the preceding.

13. --Buteo lineatus. Red-shouldered Hawk.

14. --Buteo Pennsylvanicus. Broad-winged Hawk. Not common. Taken by E. U. Prentice, of Topeka.

15. --Archibuteo lagopus. Rough-legged Hawk. Abundant in winter.

16.*--Nauclerus furcatus. Swallow-tailed Hawk. Rare.

17. --Ictinia Mississippiensis. Mississippi Kite. Baird.

18.*--Circus Hudsonius. Marsh Hawk. Abundant.

19. --Aquila Canadensis. Golden Eagle. A fine specimen of this noble bird was captured alive seventeen miles from Lawrence, in January, 1869, and was kept in confinement by the writer for nearly two years. It is now in the collection of mounted specimens belonging to the University.

20. --Haliaetus leucocephalus. Bald Eagle. Not rare.

21. --Pandion Carolinensis. Fish Hawk. Uncommon.

Strigidæ—Owls.

22.*--Strix pratincola. Barn Owl. Rare.

23.*--Bubo Virginianus. Great Horned Owl. Not uncommon.

24.*--Scops asio. Screech Owl. Abundant.

25. --Otus Wilsonianus. Long-eared Owl.

26. --Brachyotus Cassinii. Short-eared Owl. Common on the prairie in autumn and winter.

27.*--Syrnium nebulosum. Barred Owl. Common.

28. --Nyctale Acadica. Saw-whet Owl. Rare.

29.*--Athene hypugaea. Burrowing Owl. Abundant on the plains of Western Kansas.

30. --Nyctea nivea. Snowy Owl. Rare in winter.

Psittacidæ.—Parrots.

31. --Conurus Carolinensis. Parakeet, Carolina Parrot. Formerly abundant in the woods of Eastern Kansas, now seen occasionally in districts thinly settled.

Cuculidæ.—Cuckoos.

32.*--Coccygus Americanus. Yellow-billed Cuckoo.

33. --Coccygus erythrophthalmus. Black-billed Cuckoo.

Picidæ.—Woodpeckers.

34.*--Picus villosus. Hairy Woodpecker. Common.

35.*--Picus pubescens. Downy Woodpecker. Abundant.

36. --Sphyropicus varius. Yellow-bellied Woodpecker. "Taken in Kansas several times."

37.*--Hylatomus pileatus. Black Wood Cock. Rare.

38.*--Centurus Carolinus. Red-Bellied Woodpecker. Abundant.

39.*--Melanerpes erythrocephalus. Red-Headed Woodpecker. Abundant. Not shunning man as in the Eastern States, but frequenting the cities and towns, as if domesticated.

40.*--Colaptes auratus. Golden-winged Woodpecker. Often seen in the towns, but less bold than the last species.

41. --Colaptes hybridus. Hybrid Woodpecker. A mounted specimen is in the collection of Mr. O. S. George, of Topeka.

Trochilidæ.—Humming Birds.

42.*--Trochilus colubris. Ruby-throated Humming-bird. Common.

Cypselidæ.—Swifts.

43.*--Chaetura pelasgia. Chimney Swallow. Once rare; becoming common.

Caprimulgidæ.—Goat-Suckers.

44.*--Antrostomus vociferus. Whip-poor-will. Rare.

45. --Antrostomus nuttalli. Poor-will. Allen. At Topeka.

46.*--Chordeiles popetue. Night-hawk. Common.

47. --Chordeiles Henryi. Western Night-hawk. Allen. Near Fort Hays.

Alcedinidæ.—Kingfishers.

48.*--Ceryle alcyon. Belted Kingfisher. Common.

Colopteridæ.—Flycatchers.

49. --Miloulus forficatus. Scissor-tail. Baird. Taken at Fort Riley by Dr. Coues.

50.*--Tyrannus Carolinensis. King-bird, Bee-bird. Common.

51. --Tyrannus verticalis. Arkansas Flycatcher. "Western Kansas."

52.*--Myiarchus crinitus. Great Crested Flycatcher. Common; often seen in the towns.

53.*--Sayornis fuscus. Phœbe Bird.

54. --Contopus borealis. Olive-sided Flycatcher. "Passes through as a migrant."

55. --Contopus Richardsonii. Short-legged Pewee.

56. --Contopus virens. Wood Pewee.

57. --Empidonax Traillii. Trail's Flycatcher.

58. --Empidonax pusillus. Little Flycatcher.

59. --Empidonax minimus. Least Flycatcher.

60. --Empidonax flaviventris. Yellow-bellied Flycatcher. "Passes through in migration."

Turdidæ.—Thrushes.

61.*--Turdus mustelinus. Wood Thrush. Common in the timber.

62. --Turdus pallasi. Hermit Thrush. Baird.

63. --Turdus fuscescens. Wilson's Thrush. "Passes through in migration."

64. --Turdus Swainsoni. Olive-backed Thrush. "Passes through in migration."

65.*--Turdus migratorius. American Robin. Once rare, but becoming more common every year. Remains through the winter.

66.*--Sialia sialis. Blue Bird. Common. Remains through the winter.

67.*--Regulus calendula. Ruby-crowned Wren.

68. --Regulus satrapa. Golden-crested Wren. "Passes through in migration."

Sylvicolidæ.—Warblers.

69. --Anthus Ludovicianus. Titlark.

70.*--Mniotilta varia. Black and White Creeper.

71. --Parula Americana. Blue Yellow-back. Allen. Near Leavenworth.

72.*--Protonotaria citrea. Prothonotary Warbler. "Found breeding at Neosho Falls."

73.*--Geothylpis trichas. Maryland Yellow-throat.
74.*--Oporonis formosus. Kentucky Warbler.
75.*--Icteria viridis. Yellow-breasted Chat. Common.
76. --Helminthophaga pinus. Blue-winged Yellow Warbler. Allen. Near Leavenworth.
77. --Helminthophaga chrysoptera. Golden-winged Warbler. Baird.
78. --Helminthophaga ruficapilla. Nashville Warbler. Allen. Near Leavenworth.
79. --Helminthophaga celata. Orange-crowned Warbler. "Passes through in migration."
80. --Helminthophaga peregrina. Tennessee Warbler. "Passes through in migration."
81.*--Seiurus aurocapillus. Oven-bird; Golden-crowned Thrush.
82. --Seiurus noveboracensis., Small-billed Water Thrush. Baird.
83.*--Seiurus Ludovicianus. Large-billed Water Thrush.
84. --Dendroica virens. Black-throated Green Warbler. Baird.
85. --Dendroica caerulescens. Black-throated Blue Warbler. Baird.
86. --Dendroica coronata. Yellow-rump Warbler.
87. --Dendroica Blackburniæ. Blackburnian Warbler. Allen. Near Leavenworth.
88.-- Dendroica Pennsylvanica. Chestnut-sided Warbler. "Passes through in migration."
89. --Dendroica caerulea. Blue Warbler. Allen. Near Leavenworth.
90.*--Dendroica æstiva. Yellow-poll Warbler.
91. --Dendroica superciliosa. Yellow-throated Warbler. "Probably breeds in Kansas. Seen in June at Neosho Falls."
92. --Myiodioctes mitratus. Hooded Warbler. Allen. Near Leavenworth.
93. --Myiodioctes pusillus. Green Black-cap Flycatcher. "Migratory."
94.*--Setophaga ruticilla. Red-start.
95.*--Pyranga rubra. Scarlet Tanager.
96.*--Pyranga æstiva. Summer Red-bird. Baird.

Hirundinidæ.—Swallows.

97.*--Hirundo horreorum. Barn Swallow. Seen at Leavenworth by T. M. Brewer, M. D.
98.*--Hirundo lunifrons. Cliff Swallow. Common.
99.*--Hirundo bicolor. White-bellied Swallow. Not so common as in the Eastern States.

100.*--Cotyle riparia. Bank Swallow. Common.
101.*--Cotyle serripennis. Rough-winged Swallow. Common.
102.*--Progne purpurea. Purple Martin. Common.

Bombycillidæ.—Waxwings.

103.*--Ampelis cedrorum. Cedar Bird. Rare.

Laniidæ.—Shrikes.

104. --Collyrio borealis. Butcher Bird. Common.
105. --Collyrio Ludovicianus. Loggerhead Shrike. Three specimens taken in January and February, 1871. Breeds in the Southern States.
106. --Collyrio excubitoroides. White-rumped Shrike.
107.*--Vireo olivaceus. Red-eyed Flycatcher.
108. --Vireo gilvus. Warbling Flycatcher.
109.*--Vireo Belli. Bell's Vireo. Quite common.
110. --Vireo noveboracensis. White-eyed Vireo. Baird.
111. --Vireo solitarius. Blue-headed Vireo. Baird.
112.*--Vireo flavifrons. Yellow-throated Flycatcher.

Liotrichidæ.—Mocking Birds.

113.*--Mimus polyglottus. Mocking Bird. Not uncommon.
114.*--Mimus Carolinensis. Cat-bird. Common.
115.*--Harporhynchus rufus. Brown Thrush. Common.
116.*--Thriothorus Ludovicianus. Great Carolina Wren. Not uncommon, but very shy; almost impossible to find its nest.
117. --Thriothorus Bewickii. Bewick's Wren.
118. --Cistothorus palustris. Long-billed Marsh Wren.
119. --Cistothorus stellaris. Short-billed Marsh Wren.
120.*--Troglodytes aedon. House Wren. Common.
121. --Troglodytes hyemalis. Winter Wren. Baird.

Certhiadæ.—Creepers.

122.*--Certhia Americana. American Creeper.
123.*--Sitta Carolinensis. White-bellied Nuthatch.
124. --Sitta Canadensis. Red-bellied Nuthatch.
125. --Polioptila caerulea. Blue-gray Gnat-catcher.

Paridæ.—Titmice.

126.*--Lophophanes bicolor. Tufted Titmouse. Abundant; a true resident, remaining through the winter.

127.*--Parus septentrionalis. Long-tailed Chickadee.

128.*--Parus atricapillus. Black-cap Titmouse. Common and a resident.

Alaudidæ.—Larks.

129.*--Eremophila cornuta. Skylark. Very abundant; remains through the winter, when it moves in flocks, and is commonly called "Snowbird."

Fringillidæ.—Finches and Sparrows.

130. --Pinicola Canadensis. Pine Grosbeak. "Occurs in winter; taken by Sidney Smith, of Leavenworth."

131. --Carpodacus purpureus. Purple Finch. "Migratory."

132.*--Chrysomitris tristis. Yellow Bird. Resident; seen in large flocks in winter.

133. --Chrysomitris pinus. Pine Finch. "Rare in winter."

134. --Curvirostra Americana. Red Crossbill. "Rare in winter."

135. --Curvirostra leucoptera. White-winged Crossbill. "Rare in winter."

136. --Plectrophanes nivalis. Snow Bunting. In winter.

137. --Plectrophanes lapponicus. Lapland Longspur. Common in flocks in winter.

138. --Plectrophanes pictus. Smith's Bunting. Baird.

139. --Plectrophanes ornatus. Chestnut-collared Bunting. Allen. Near Fort Hays.

140. --Plectrophanes melanomus. Black-shouldered Longspur. Baird.

141. --Plectrophanes Maccownii. Maccown's Longspur. Allen. Near Fort Hays, in winter.

142. --Passerculus Savanna. Savannah Sparrow.

143. --Passerculus alaudinus. Lark Sparrow.

144.*--Poocætes gramineus. Grass Finch. Common.

145. --Coturniculus passerinus. Yellow-winged Sparrow. Taken by Dr. Cooper.

146.*--Chondestes grammaca. Lark Finch. A prairie bird, and very abundant.

147. --Zonotrichia leucophrys. White-crowned Sparrow.

148. --Zonotrichia querula. Harris' Finch. Often taken in winter, probably resident.

149. --Zonotrichia albicollis. White-throated Sparrow. Common.

150. --Junco Oregonus. Oregon Snowbird. Occasional in winter.

151. --Junco hyemalis. Black Snowbird. Abundant in winter.

152. --Poospiza bilineata. Black-throated Sparrow. "Taken by Dr. Coues in Western Kansas."
153. --Spizella monticola. Tree Sparrow. Abundant.
154.*--Spizella pusilla. Field Sparrow. Common.
155.*--Spizella socialis. Chipping Sparrow. Less common than at the East.
156. --Spizella pallida. Clay-colored Bunting. Baird.
157.*--Melospiza melodia. Song Sparrow. Common in the timber.
158. --Melospiza Lincolnii. Lincoln's Finch. "Migratory in spring and fall."
159.*--Melospiza palustris. Swamp Sparrow. Common.
160. --Peucaea Cassinii. Cassin's Finch. Allen. Near Fort Hays.
161. --Passarella iliaca. Fox-colored Sparrow. Common in migration.
162. --Passarella schistacea. Slate-colored Sparrow. Rare, only one specimen taken.
163. --Calamospiza bicolor. Lark Bunting. "Western Kansas." Also seen in Eastern Kansas by Dr. Hoy.
164.*--Euspiza Americana. Black-throated Bunting. Abundant on the prairie.
165.*--Guiraca Ludoviciana. Rose-breasted Grosbeak. Common in the timber.
166. --Guiraca melanscephola. Black-headed Grosbeak. Allen. Near Fort Hays.
167.*--Cyanospiza amoena. Lazuli Finch. "Western Kansas."
168.*--Cyanospiza cyanea. Indigo Bird. Very common.
169.*--Cardinalis Virginianus. Red Bird. Abundant and a true resident, remaining in winter.
170.*--Pipilo erythrophthalmus. Ground Robin, Chewink. Common and resident.

Icteridæ.—Blackbirds.

171.*--Dolichonyx oryzivorus. Bobolink. Rare.
172.*--Molothrus pecoris. Cow-bird. Abundant.
173.*--Agelaius phœniceus. Red-winged Blackbird. Abundant.
174.*--Xanthocephalus icterocephalus. Yellow-headed Blackbird. Abundant, generally in the same flock with the Cow-bird.
175.*--Sturnella magna Meadow Lark. Abundant.
176.*--Sturnella neglecta. Western Lark. This species, though closely resembling the preceding, has an entirely different song, and presents certain well-marked and constant differences of plumage. Both species are abundant in Eastern-Kansas.

177.*--Icterus spurius. Orchard Oriole. Common.

178.*--Icterus Baltimore. Baltimore Oriole. Not uncommon.

179.*--Icterus Bullockii. Bullock's Oriole. Quite frequent.

180. --Scolecophagus ferrugineus. Rusty Blackbird. "Migratory in spring and fall."

181. --Scolecophagus cyanocephalus. Brewer's Blackbird. Quite common even in Eastern Kansas.

182.*--Quiscalus versicolor. Crow Blackbird. Abundant, and without fear of man, often nesting in the city of Lawrence.

Corvidæ—Crows.

183.*--Corvus carnivorus. American Raven. "Common on the plains of Western Kansas."

184.*--Corvus Americanus. Common Crow. Common, and tamer than in the Eastern States.

185. --Pica Hudsonica. Magpie. Seen in Shawnee county, in October, 1871, by C. E. Pond.

186.*--Cyanura cristata. Blue Jay. Abundant, resident; has little fear of man, often nesting in Lawrence.

Columbidæ—Pigeons.

187. --Ectopistes migratoria. Wild Pigeon. Not common.

188.*--Zenaidura Carolinensis. Carolina Dove. Abundant.

Phasianidæ—Pheasants.

189*--Meleagris gallopavo. Wild Turkey. Becoming rare near the towns; not uncommon in the timber elsewhere.

Tetraonidæ—Grouse.

190. --Centrocercus urophasianus. Sage Cock. A single specimen, shot from the track of the Kansas Pacific Railway in November, 1870, before the extension of the road into Colorado, was brought to me by a friend, who reported this species "common on the plains of Western Kansas."

191. --Pediscaetes phasianellus. Sharp-tailed Grouse. Allen. Common about Fort Hays.

192.*--Cupidonia cupido. Prairie Chicken. Abundant. Sold in the markets for $1.50 to $3.00 per dozen; protected by game law from March 1st to August 1st.

193. --Bonasa umbellus. Ruffed Grouse or Partridge. Extremely rare; taken by Charles Chadwick, Esq., of Lawrence.

Perdicidæ—Partridges.

194.*--Ortyx Virginianus. Bob White or Quail. Abundant; sold in the markets for $1.00 per dozen; protected by game law from March 1st to October 1st.

Gruidæ—Cranes.

195. --Grus Americanus. Whooping Crane. Rare in migration. A fine specimen was shot near Lawrence in November, 1871. The mounted skin is in the University Museum.

196. --Grus Canadensis. Sandhill Crane. Abundant during the migrations.

Ardeidæ—Herons.

197. --Herodias egretta. White Heron. Not common.
198. --Ardea herodias. Great Blue Heron. Not uncommon.
199.*--Ardetta exilis. Least Bittern.
200. --Botaurus lentiginosus. Bittern, Stake Driver. Quite common.
201.*--Butorides virescens. Green Heron. Common.
202. --Nyctiardea Gardenii. Night Heron. Rare.

Charadridæ.—Plovers.

203. --Charadrius Virginicus. Golden Plover. "Migratory in October."
204.*--Aegialitis vociferus. Killdeer. Abundant.
205. --Aegialitis montanus. Mountain Plover. Allen. Western Kansas.
206. --Aegialitis semipalmatus. Ring Plover. Common.
207. --Aegialitis melodus. Piping Plover. Baird.
208. --Squatarola helvetica. Black-bellied Plover. Baird.

Recurvirostridæ.—Avosets.

209. --Recurvirostra Americana. American Avoset. Rare.

Phalaropodidæ.—Phalaropes.

210. --Phalaropus Wilsonii. Wilson's Phalarope. "Migratory in spring and fall."

Scolopacidæ.—Snipes.

211. --Philohela minor. American Woodcock. Rare.
212. --Gallinago Wilsonii. English Snipe. Common.
213. --Macrorhamphus griseus. Gray Snipe. Common
214. --Macrorhamphus scolopaceus. Greater Longbeak. "Migratory in spring and fall."
215. --Tringa canutus. Knot, Robin Snipe. Common.
216. --Tringa Alpina, var. Americana. Red-backed Sandpiper. Allen. Near Leavenworth.

217. --Tringa maculata. Jack Snipe. Common.
218. --Actodromas Bairdii. Baird's Sandpiper. Baird.
219. --Tringa Wilsonii. Least Sandpiper. Abundant.
220. --Tringa Bonapartii. Bonaparte's Sandpiper. "Migratory in spring and fall."
221. --Ereneutes petrifactus. Semipalmated Sandpiper. "Migratory."
222. --Symphemia semipalmata. Willet. "Occasional in fall." A large flock was seen on the Kansas River, near Lawrence, April 25, 1872.
223. --Gambetta melanoleuca. Tell-tale, Stone Snipe. Common.
224. --Gambetta flavipes. Yellow-legs. Abundant.
225. --Rhyacophilus solitarius. Solitary Sandpiper. Rare.
226. --Tringoides macularius. Spotted Sandpiper. Common.
227. --Actiturus Bartramius. Field Plover. Abundant on the open prairie in May.
228. --Tryngites rufescens. Buff-breasted Sandpiper. Occasional in fall
229. --Limosa fedoa. Marbled Godwit. Rare.
230. --Limosa Hudsonica. Hudson Godwit. Baird.
231.*--Numenius longirostris. Long-billed Curlew. Not uncommon. Found breeding on the plains of Western Kansas, by J. A. Allen.
232 --Numenius Hudsonicus. Hudsonian Curlew. Baird.
233. --Numenius borealis. Esquimaux Curlew. Allen. A single specimen seen in Western Kansas.

Rallidæ—Rails and Coots.

234. --Rallus elegans. King Rail. Rare.
235.*--Rallus Virginianus. Virginia Rail.
236. --Porzana Carolina. Common Rail.
237. --Fulica Americana. Coot, Mud-hen. Abundant in spring and fall.
238. --Gallinula galeota. Florida Gallinule. Baird.

Anatidæ—Swans, Geese, Ducks.

239. --Cygnus Americanus. American Swan. Rare.
240. --Cygnus buccinator. Trumpeter Swan. "Migratory; breeds in Iowa."
241. --Anser hyperboreus. Snow Goose. Common in migration.
242. --Anser Gambellii. Laughing Goose. Taken at Topeka, February, 1872.
243. --Bernicla Canadensis. Canada Goose. Abundant in spring and fall, sometimes remaining all winter.
244. --Bernicla Hutchinsii. Hutchins' Goose. Baird.

245. --Bernicla brenta. Brant. Common.

246. --Anas boschas. Mallard. Common.

247. --Anas obscura. Black Duck. Not common.

248. --Dafila acuta. Common, sometimes remains all winter.

249. --Nettion Carolinensis. Green-winged Teal. Abundant.

250. --Querquedula discora. Blue-winged Teal. Abundant; probably breeds in Kansas.

251. --Spatula clypeata. Shoveller. Common.

252. --Chaulelasmus streperus. Gadwall. Common.

253. --Mareca Americana. Baldpate, American Widgeon. Common.

254.*--Aix sponsa. Summer or Wood Duck. This is the only species in the family of which I can say with certainty that it breeds in Kansas. Nearly all the other species are abundant for about two months, both in spring and fall.

255. --Fulix marila. Greater Black-head, Blue-bill, Scaup Duck. Common.

256. --Fulix affinis. Little Black-head. Common.

257. --Fulix collaris. Ring-necked Duck. Common.

258. --Aythya Americana. Red-head. Abundant.

259. --Aythya vallisneria. Canvas-back. Not uncommon.

260. --Bucephala Americana. Golden Eye, Whistle Wing. Rare.

261. --Bucephala albeola. Butter Ball. Common.

262. --Erismatura rubida. Ruddy Duck. Rare.

263. --Mergus Americanus. Sheldrake, Fish Duck. Common.

264. --Mergus serrator. Red-breasted Merganser. Baird.

265. --Lophodytes cucullatus. Hooded Merganser. Not common.

Pelecanidæ.—Pelicans.

266. --Pelecanus erythrorhynchus. American Pelican. Common during the migrations, especially in the fall. A specimen taken near Lawrence, October 20, 1871, measured eight feet and five and three-sixteenth inches from tip to tip of wings.

Phalacrocoracidæ.—Cormorants.

267. --Graculus dilophus. Double-crested Cormorant. Rare in migration.

268. --Graculus Floridanus. Florida Cormorant. Rare; a single specimen taken four miles south of Lawrence, April 2nd, 1872, by Geo. D. Alle

Laridæ.—Gulls, Terns.

269. --Larus argentatus. The Herring Gull or Silvery Gull. A single specimen is in possession of E. U. Prentice, Esq., of Topeka, who has prepared a fine collection of mounted birds.

270. --Chroicocephalus Franklinii. Franklin's Rosy Gull.
271. --Sterna Wilsoni. Wilson's Tern. Rare in migration.
272. --Sterna Forsteri. Forster's Tern. Migratory.
273. --Sterna frenata. Least Tern. Rare.
274. --Hydrochelidon plumbea. Short-tailed Tern. Migratory.

Colymbidæ.—Grebes.

275. --Colymbus torquatus. Loon. Migratory.
276 --Podiceps cornutus. Horned Grebe.
277. --Podilymbus podiceps. Carolina Grebe, Dobchick. Common. Probably breeds in Kansas.

A TRIP TO DENVER AND COLORADO SPRINGS.

AS I THOUGHT IT WOULD BE, AND AS IT WAS.

[WRITTEN FOR WESTON'S GUIDE.]

HERE AM I, seated on the piazza of a comfortable hotel, with my feet as high as I can conveniently get them, a l'Amercaine, (and by the way a very comfortable position I find it,) "poisoning the air," as the anti-tobacco tracts say—defiling the champagne air of the Rocky Mountains with a mild Havana, and looking upward with the usual cool effrontery of latter day man, on one of the most majestic of God's creations, the Peak of Pike, which, towering upward some eight thousand feet above me, proudly lifts its silvery crest toward——hold on, though! I am growing too suddenly poetical, besides commencing to spin my yarn tail end first; but the "Muse is onto me," and I can't help it.

I am a "blarsted Britisher," as it is pleasantly termed here, and come from the East, but shall begin at Kansas City, the key to that great western country, concerning which there is so much romance, and mystery, and ignorance among us orientals. I cannot but smile as I look upon the pair of huge six-shooters and awful pig-sticking looking knife, and the slouch hat, and general horse-thief looking rig that I purchased expressly for the trip. You may not believe it, but I tell you I have several times regretted leaving my dress suit behind, and have missed more than one pleasant "shine" through not having my "steel pen coat."

To be candid, my impressions at the start were a chaotic mixture of long haired plainsmen, navy revolvers, bowie knives, redskins, war paint, across a desert, blinded by sand, sirocco, dead from thirst, vigilance committees, buffalo, wolves, and the who-whoop! of the interesting savage of Mayne Reid and Fennimore Cooper—ha! ha! All bosh; every bit of it. And now I will try and give you a sort of line etching of my jaunt as it really was.

Arrived at Kansas City, the City of the Hills—which is like Rome only in the one respect that it entirely differs from it, the latter being built on seven hills, and the former on seventy. Got off the train at the Union Depot, and having paid the usual charge of fifty cents, was driven to the Broadway, which I found to be a fine large hotel, and most ably managed. Sat down at six o'clock P. M. to a *quasi* dinner, (they all dine early out West,) and with the aid of a bottle of Scotch ale, fared sumptuously, or as they say here, "made a square meal," smoked a cigar, and at eight o'clock P. M. dropped into Coates' Opera House across the street, which, by the way, is a fine building, and capable of seating two thousand people, and saw the renowned Murphy in his Dutch songs and eccentricities. At forty-five minutes past ten P. M., stepped on board the through express train of the great Kansas Pacific Railway bound for Denver, and took my seat in the Pullman Palace car, "Globe,' one of the easiest of runners, and with the most agreeable of conductors.

It struck me, as I reclined on the comfortable cushion, how we take everything as a matter-of-course in the present day. We sit down in a car which cost over twenty thousand dollars—a sum sufficient to build a fine house—see our face and the back of our ears in a dozen splendid mirrors, and take this and all the costly inlaid work and luxurious fittings as a matter of course, without ever reflecting on the cost of the enterprise.

Turned in after smoking a weed, and was awakened at eight o'clock A. M., by the Ethiopian with "Coming into Salina, sir! Twenty minutes for breakfast." Here I found a commodious hotel, about fifty yards from the train, in front of which a stout red-faced gentleman was playing variations on a fearful gong. This hotel belongs to the Railway Company, and is well kept. Bill of fare for breakfast was: Ham and eggs, chicken stew, beefsteak, chops, fried potatoes, stewed tomatoes, fried mush, buckwheat cakes, tea and coffee, hot rolls, and a host of et ceteras. In fact, it was capital, and good enough for any nabob; or, as a rough looking customer next me said, in a gruff voice, "It is good enough for a dorg"—a Western way of paying a compliment, I suppose.

We now traversed the most enchanting country, dotted here and there with settlers' cottages and herds of cattle, passed through the pretty railway town of Brookville, and at noon reached Wilson, the centre of the finest agricultural and stocking raising district on the line. Here I saw gently undulating prairie that looked like an immense lawn, the Smoky Hill River intersecting it with serpentine course, and abounding with springs, the landscape being relieved in the back-ground by a range of bluffs, covered with the dark green foliage of the red cedar. Here, where nine months ago there was not a settler, is now a thriving young town and hundreds of farmers and stock raisers. And now we roll through Fort Hays, where proudly waves the stars and stripes, through Ellis, and out into the Great Plains, one vast, interminable meadow. Here was one of my hopes realized—leaving Fort Wallace we got among the buffaloes, thousands of which may be seen far and near. The great North American bison seemed however tolerably indifferent to the train; some who were very close moved off at an unwieldy gallop, while the masses stood and sullenly watched us from beneath their shaggy brows; it was a noble sight and no mistake.

Further on we passed herds of the graceful antelope, and through prairie dog towns, where hundreds of the citizens sat upon their hind-legs at the entrance of their dwellings, and yelped defiance at the great smoky stranger that was thundering through their ancient municipalities. The only monotony I saw on the plains was a station on the line of that name. Had a rattling good supper at Wallace, with the addition to the Salina bill of fare, of buffalo hump, buffalo tongue, and antelope steak, and turned in again to wake at seven o'clock A. M., in Denver City, at the foot of the Shining Mountains. I shall never forget the grandeur of the sight as I drew back the curtain of my sleeping berth, and looked for the first time on the "everlasting hills." The early sun was shining brightly, throwing all sorts of fantastic shadows on the foot-hills, and silvering the white summits of the Snowy Range with a brightness almost too dazzling to look upon. Seventy miles to the northward towered Long's Peak, every gorge and chasm on its rugged sides being nearly discernible, while a drooping white cloud enveloped its venerable head with a fleecy, gauze-like veil.

Hoop-la! You see I've got my poetry machine greased again; but I honestly believe the foregoing is original, and there is certainly some merit in writing on a subject that every penny-a-liner has had a hack at. The clearness of the atmosphere is wonderful, and may be estimated when I tell you that from the roof of a house in Denver City, I looked upon two hundred and fifty miles of mountains, and many men, on first arriving here, have started to walk to the mountains and back before breakfast, thinking them to be about two miles off, when in reality they are twelve. Just before turning in, the previous evening, I had the pleasure of an introduction to Beverley R. Keim, Esq., General Ticket Agent of the Kansas Pacific Railway, who was on one of his periodical business trips over the line, and, as he informed me, intended extending his trip to Colorado Springs, with the view of ascertaining whether he could conscientiously recommend his passengers to visit there as a summer resort. So as that happened to be my destination, I was very glad of the chance of making the trip in his agreeable company.

But I digress. On the arrival of the train we hurried up to the "Delmonico of the West," where we had a breakfast just as far ahead of anything I had experienced in the West as it well could be. Beefsteak *as was* beefsteak; *rare and broiled*, mind you, without gravy, not thin and black and floating in beastly stuff, resembling hair oil. "Lo! the poor American, whose uhtutored mind, likes his beefsteak fried in lard and grease of other kinds." Breakfast over, we hurried to the Denver and Rio Grande, and at half past eight o'clock precisely, "toot! toot!" went the diminutive whistle, "ting-a-lin" went a bell that reminded me of "muffins all hot!" in the London streets of my boyhood, and we were off on the "little gauge" along the base of the Rocky Mountains, bound for the Saratoga of the West. I felt inclined to laugh when I first looked at this doll's train. For a short road into the mountains, to take the place of stages and wagon, nothing could possibly be better, but I, who am six feet high and long in the legs, would decidedly object to sitting with my knees in my mouth for any distance over one hundred miles.

The ride along the valley of Plum creek to the top of the divide between the Platte and the Arkansas rivers was very grand, and that down the other side to our destination, simply too beautiful for description. We passed by grassy slopes, between huge mountains, past castellated rocks of white sandstone, half-hidden by the groves of pines, and reminding one of the ruins of ancient castles so numerous in the Old World, past monuments of red and white sandstone with ferruginous caps, over creeks and under occasional snow sheds, until we pulled up at Colorado Springs, situated at the base of Pike's Peak, the summit of which is fourteen thousand feet above the water, and is, as a man on the train unromantically observed, "a big thing on ice," or as an intelligent Teuton repeated to his friend a minute afterwards, "a big thing mit ice on." The Dutchman hadn't quite got the idiom, but he was right nevertheless. We then went up to the hotel, had a very fair dinner, and then turned out to inspect the town, which consists of about fifty buildings, stores, livery stables, railroad offices, etc.

The great resources of the town of Colorado Springs are evidently its gorgeous scenery, its mineral springs, and the trade derived from the large silver mining district of Fair Play, in South Park. To this point they are about building a first-class wagon road, and as it is about one hundred and five miles from Denver to that point, over several difficult grades, and only eighty-three from Colorado Springs, with one easy grade, it is probable that all their supplies will be procured from the latter place, and their ore shipped there. My humble opinion is, that during the season, Colorado Springs will be a resort for thousands of invalids and pleasure-seekers. But to my muttons: I had to return to Denver the next day. The train started at noon, and I wished to see the springs, which, through the kindness of Mr. Maurice Kingsley, a gentleman residing in the town, I was enabled to do.

Next morning, just as I had finished my chop and toast, Mr. Kingsley drove up to the hotel with a light carriage and capital team, and invited me to jump in, which I quickly did, and lighting our "vile weeds," off we started along the hard gravel road at a spanking pace. We dashed through old Colorado City, up the most magnificent mountain gorges, and in half an hour drew rein at Manitou. Here is the stream of Fountain qui Bouille, and over it a perfect gem of a rustic bridge, artistically built of the mountain pine—a little further on two summer houses, built in the same style over the basins in the rock, out of which boiled and seethed the delicious soda water. I took a deep draught of the refreshing fluid, and one thing only was wanting to complete my happiness—I longed for a bottle of Martell or Hennessey, that I might once more enjoy the B. and S. of my earlier days. Mr. Kingsley, who is a Britisher, sympathized with me.

On the opposite side of the creek is the Galen Spring, supposed to be the richest in the world, containing over an ounce of medicated matter to every four gallons of water; the Chalybeate Spring, whose waters resemble those of Pyrmont in Europe, is called the "Iron Ute," the other is called the Navajo. Then there is a comfortable bath house into which the water from the springs is conveyed by pipes; and a temporary hotel, but by the end of May a hotel will be completed that will accommodate one hundred and fifty guests. Professor Thomas M. Drown, M. D., of Philadelphia, gives the following analysis of the Doctor spring as compared with the Krahuchen spring at Ems and the Seltzer spring in Nassau, the two most celebrated springs in Europe:

	Krahuchen Spring.	Seltzer.	Galen.
Chloride of Sodium	27.25	51.68	36.69
Chloride of Potassium	— —	0.85	10.01
Bi-carb. of Soda	57.03	29.29	24.01
Sulphate of Soda	0.56	0.76	4.78
Bi-carb. of Lime	6.65	8.00	15.62
Bi-carb. of Magnesia	5.83	7.65	8.89
Bi-carb. of Iron	0.67	0.29	— —

The villa sites at Manitou were laid out by Mr. Blair, the well-known landscape gardener of Chicago, and no comment as to their tasty arrangement is necessary. From here we drove to the Garden of the Gods, the beauty of which I cannot attempt to describe—all adjectives and expressions seem stereotyped and useless.

The gate or causeway is formed of two gigantic masses of red sandstone, upward of three hundred feet high. Looking through these from the outside you see the dark green foliage of the trees in the basin forming the garden, with Pike's Peak for a back-ground and its snow-clad summit, forming a lovely combination of colors. We then drove to the little Garden of the Gods, in which General Palmer has built his chateau of Glen Eyrie. At the entrance stands a rustic lodge, and the picturesque style of architecture of the house itself so entirely harmonizes with the romantic surroundings that it seems more like fairy land than reality. After a hurried visit to Monument Park, which, with its curious sandstone pillars, looks like a giant cemetery, we met the train at Monument station at 1 p. m., where I took leave, with much regret, of my kind friend and his magnificent scenery.

The narrow gauge landed us in Denver again about dusk, and after getting a good inside over-coat, we retired pretty well fatigued. Next morning we were up bright and early, and fortified with a good breakfast prepared to "do Denver." Fortunately we ran across Mr. Andy Hughes, the well-known, who, with the proverbial kindness of Denver's prominent citizens, ordered out a splendid black team and handsome carriage, and drove us around to "see the elephant." What we saw I have hardly space to specify, but in general terms I consider Denver one of the most romantically situated towns in the world—has the finest climate for invalids, the grandest scenery, and the most hospitable of citizens. So many other bards have sung the praises of its boulevards, its fine hotels, splendid race track, fair ground, breweries, handsome residences, etc., that it were a work of supererogation for me to attempt it.

I will here mention though what others forgot, and that is, I discovered in Denver a capital tap of Bass' Ale! real Bass, mind you, and at the foot of the Rocky Mountains! Think of that and weep! The streets of Denver are broad and well paved and lined with trees, some three hundred thousand of which were planted last year. At the market you will see every variety of game—antelope, bear, ibex, grouse, hares, and vegetables of enormous size, and in the greatest profusion. Stylish turnouts and fast trotters bowl along the Boulevards; and I must mention here that I got some very fine Bass ale in Denver.

It was with deep regret that I bid good bye to this aristocratic little city and—the Bass ale, but I believe I mentioned this before. Going home on the Kansas Pacific Railway, I met that prince of conductors and jolly good fellows, Major A. J. Cheney, who for keeping a whole train load of passengers amused, has not, as A. Ward would say, "a livin ekal." We tried a joke or two on him, but "try to fool the old man, eh!" This is a local joke, but the gentlemen of the Kansas Pacific will understand it. Ta-ta!

PULLMAN PALACE CARS.

IT HAS been often remarked by travelers that the farther West you go, the handsomer the Pullman cars are, and when they strike the Kansas Pacific Railway, that line "caps the climax" for the magnificence of these luxurious coaches and their appointments. Those running on the above line are the "Dexter," "Wayne," "Kenwood," "Atlas," "Prairie Queen," "Lawrence," and "Topeka," all drawing-room cars, beautifully furnished, and of the very latest designs. A trip over the Great Plains, reclining in velvet cushions and pictured in a score of mirrors, is at once novel and delightful, and entirely unattended by weariness. The traveler leaves Kansas City at eleven o'clock, P. M., goes to bed, and wakes up at Salina for breakfast, dines at Ellis, sups at Wallace, goes to bed again, and wakes up next morning at Denver, but the ride by daylight shows him all the most beautiful features of the country.

The fare from Kansas City to Denver is five dollars, which is the same rates as charged on Eastern roads, viz: two dollars per night, and one dollar per diem. The fare for a drawing-room, containing two double berths and two single, is eighteen dollars. The Pullman Palace Car Company employs the most gentlemanly of conductors and attentive porters, who are always ready to give information and minister to the wants of visitors to the great West.

The cars are all ventilated with water ventilators, which take the dust out of the air and cool it effectually. Berths may be secured any time ahead by telegraphing to the General Ticket Agent of the Kansas Pacific Railway. T. B. Boothby, Esq., Assistant Superintendent of the Pullman Palace Car Company, has his office at the Union Depot, Kansas City.

COLORADO AS A RESORT FOR INVALIDS.

THE FOLLOWING article was published in the Colorado *Gazetteer* for 1871, by Messrs. Wallihan & Co., and at the request of Beverley R. Keim, Esq., the General Ticket Agent of the Kansas Pacific Railway, the Denver Medical Association gave it their consideration, and fully endorsed it, as will be seen by the appended letter to Mr. Keim, from the medical gentlemen composing that Association:

"So much has been said of the wonderful effects of a residence in Colorado, in restoring invalids to health, and, in particular, of her wide-spread celebrity in the relief and cure of tubercular and pulmonary affections, that a brief consideration of this important subject may not be out of place.

"Probably it is not amiss to assert that at least one-third of the present population of Colorado consists of reconstructed invalids. They have come here from all sections of America, and some, even, from the old world—all in eager search of the fabled Fountain. Some came with gnawing and intractable dyspepsia; some with asthma or bronchitis; others had commenced 'bleeding at the lungs,' or were confirmed and hopeless victims of old-fashioned 'consumption.' Many, it must be said, came too late. On the other hand, thousands, whose cases were considered hopeless, have here found permanent and gratifying relief. This is especially true of asthmatics. For this class of patients the atmosphere of Colorado is almost a certain panacea.

"Having given this subject especial investigation, and closely questioned the best medical authorities of the locality, we are led to conclude that, in cases of asthma, although the above statements are not exaggerated, the cure is chiefly negative—an absence of the irritating and inciting causes, rather than any miraculous healing qualities inherent in atmosphere or climate. Without, however, entering upon a study of the metaphysics of physiology, it is enough to know that, unless the convalescent returns again to his old haunts and habits, and to the original cause of his disease, this dreadfully distressing malady is here perfectly and permanently cured.

"One of the most eminent medical authorities, in treating of asthma, strongly urges a change of residence, as a last resort, and says:

"'There are no fixed laws with respect to the best climate or situation for asthmatics; each case has its own law, which is only to be ascertained by experience. The principal to be acted upon is that there is a locality in which each martyr to this complaint will suffer less, and, perhaps, be entirely free from it; and the plan should be to make repeated trials until the desired spot is found.'

"We can improve upon this advice by assuring its learned author (Prof. Austin Flint, of Bellevue Medical College, New York,) who is himself a great sufferer from asthma, that 'the desired spot' has certainly been found. The disease, in its most aggravated and long-seated forms, is relieved in so nearly every instance, by a residence here, that the exceptions are not to be taken into account; and almost perfect immunity from it is enjoyed by every case remaining in the dry, salubrious atmosphere and perpetual sunshine of Colorado.

"Consumptives, who come here before the ravages of the disease have been already too long unchecked, almost certainly recover; while others, who could exist elsewhere only in constant suffering and helplessness, are here enabled to pass the remainder of their days in comparative comfort, frequently regaining a considerable degree of vigor.

"Dyspeptics also recover their lost powers of assimilation, and by proper care, become robust, and competent at table.

"Those afflicted with bronchitis and affections of the throat, many of whom have tried Minnesota, the West Indies, California and sea voyages, in vain, become sound and well by a sojourn in Colorado.

"An analysis of the elements combining to produce such apparently remarkable results, would lead to the consideration of the following:

"1. *Altitude.*—As will be seen by our chapter on physical geography, Colorado, as a whole, occupies the topographic center, and is, in fact as well as figuratively, the summit of the continent. Taken in detail, its different localities present a great variety of elevation, ranging from four thousand feet, in the Arkansas Valley, to ten thousand feet, in the mountain parks, above the sea-level.

"Considerable difference of opinion exists, among medical men, as to what altitude, other things being equal, is most favorable for chronic invalids of of the classes mentioned. This, undoubtedly, depends very much on the character of the disease, the age, temperament, and habits of the patient, and the particular stage of advancement of the malady, whatever it may be. In some cases of asthma the higher the elevation, the more speedy and perfect the relief. Occasionally inveterate cases fail of substantial aid until they ascend to some of the mountain towns, a residence in the valley—as everything outside of the mountains proper is here termed—only ameliorates the severity of the paroxysms. On the other hand, cases of advanced pulmonary disease at the altitude of Georgetown (nearly nine thousand feet,) would prove speedily fatal; while at Pueblo, on the Arkansas, (four thousand five hundred feet,) the patient would steadily improve, or, at least, live in comparative comfort.

"Mere altitude is not, however, as a rule, the primary thing to be considered, although its influence is more or less marked in every case. The physiological effects of a residence in high altitudes are to hurry respiration, and, consequently, accelerate the pulse; to compel an augmentation of the breathing capacity rapidly and at once, in order to provide the requisite quantity of oxygen from the rarefied air inspired. Hence the danger to those who are far advanced with tubercular consumption, and to such as are subject to pulmonary hemorrhage. For the same reason, patients suffering from certain forms of heart disease are more injured than benefited by a removal to localities much more elevated than the one to which they have been accustomed.

"For almost every form of disease, barring the exceptions mentioned above, the increased activity imposed on the respiratory organs, by residence in high altitudes, is a direct and constant benefit. Nothing is better for a dyspeptic, or a sufferer from hepatic disorder, indigestion, or general torpor, than to make him breathe. Increase his respirations from sixteen to twenty-four per minute, and you give him a new experience. His blood circulates with equally increased rapidity, and is much more perfectly ærated; his appetite is increased; digestion and assimilation promptly responding to the increased demand and the increased action of the diaphragm, his biliousness oozes out through the pores of his skin, and lo, he becomes a new being!

"One of the curses of civilized life is the consummate stinginess with which people breathe. Here, whether in the 'valley' or on the mountain heights—for even the bed of the Platte, at Denver, is a lineal mile higher above the sea level, than New York or Philadelphia—one must breathe both more fully and more rapidly or die of suffocation. The result is a permanent increase of the breathing capacity. The chest of a well-proportioned man, by actual measurement, has been known to expand three inches in as many weeks, after arriving here, and the appetite keeps pace with the respiration.

"The effect is a general awakening of all the vital powers, that often seems like very magic, so that no matter what was the original complaint, the patient is suddenly and substantially improved.

"2. *Climate.*—This varies considerably with the altitude, as well as the varying topography of the country. Almost any climate desired can be found within the limits of Colorado. In the southern portion, and in some of the sheltered valleys, there are days in midsummer when, for a few hours, the mercury ranges above 100° Fahr.; while, at the same moment there are heights in the mountains where one would be comfortable in the fur wrappings of a Laplander.

"At Trinidad, near the Southern borders, in the valleys of the Huerfano and Apishapa, and at Pueblo, on the Arkansas, the season opens considerably earlier than at Denver and other points north of the 'Divide.' Even at Colorado City, on the Fontaine qui Bouille, the springs are noticeably earlier than they are but a short distance further north and across the 'Divide.' The southern slope of the latter, extending from its crest to the Arkansas—a distance of eighty miles—is so situated as to catch the perpendicular rays of the sun, and gather spring-like warmth from them, while yet the snows lie, unmelted on the northern slope. Also, more snow falls in winter on the latter than on the former.

"Colorado City is situated at about the middle, and Pueblo at the base of the southern slope; while Denver is midway, and St. Vrain at the foot of the Northern.

"Located in that happy mean of latitude (37° to 41° North,) between the extreme winters of the Northern States and the enervating heats and humidity of the Southern, Colorado enjoys, as a whole, the most equable and desirable climate of any portion of the western hemisphere. Its winters are mild, comparatively little snow falling, except on the mountain ranges; and its summers are remarkably cool and bracing. There is about a month of each season during which, in the valley country, the mercury, at midday, ranges as high as at New Orleans; but one needs to keep on hand, in July, about the same clothing as is required at Christmas; and there are not half a dozen nights in the season when a pair of blankets to sleep under are, in any degree, uncomfortable. In the mountain towns gloves and overcoats are very convenient, even in dog-days; and flannel underclothing should everywhere be worn the year round.

"3. *Alimentation.*—By which is meant, not merely the kind and quantity of food taken, but its essential qualities and its utilization in the animal economy.

"Bread, the leading staple in all dietaries, is of uniformly better quality, in Colorado, than in any other portion of the western country. Not that citizens of Colorado are, naturally or by practice, better bread-makers than those of other sections, but have much better material to use, and could not, if they would, make an inferior article. The best specimens of wheat raised in Colorado are not excelled by that of any country in the world, while the quality of that cereal is more uniformly good than that of any section of the United States, not even excepting California. It is always plump, white, thin-skinned, and wholly free from every species of hereditary taint, smut, rust, blight, etc. The famous "blue-stem" of the Genesee Valley, the "white-winter" of Michigan, and the "Southern white" of Tennessee and Kentucky are, none of them, equal to the commonest varieties grown from the fresh, airy and wholesome soil of these mountain regions.

"Without extremely delicate and, as yet, impracticable scientific tests, it cannot be demonstrated that wheat grown in one section is chemically different from that of another; but, from various experiments, it would seem that Colorado-grown cereals are unusually rich in some of those essential elements, including the phosphates, now so highly extolled by physicians and physiologists in the treatment of tubercular and other diseases involving a lowered condition of the vital functions.

"We have not space to pursue this inquiry further, except to state, in a general way, that this soil, formed by centuries of slow disintegration and drifting down of mountain masses, is exceedingly rich in free alkaline matter—soda, potash, lime, etc.

"The first crop of wheat raised, in some localities, was so imbued with the alkaline principle that it would effervesce with an acid, and would almost 'suds' with water. In fact, it could not be eaten at all.

"Since the same soil has been turned up to the air, exposed to frosts, and washed with frequent rains and artificial irrigation, it has parted with this superficial excess of alkali, and yet retains this element in sufficient proportions to render other needed elements more soluble and easier of assimilation by plants.

"Whatever be the causes, evidently Colorado flour is richer than other samples in the earthy and essential elements that help to build up healthy tissue. Even the bread of the everywhere poorest of all breadmakers—the professional baker—is, here, fairly and uniformly passable and palatable. It is neither tough nor tasteless; it has flavor and satisfies.

"Colorado beef is becoming equally famous with Colorado bread. One of the first reasons for this is that it is never made by stall feeding. All the beef produced here is exclusively from animals that range at will, and grow tender and fat with feeding on the succulent and perennial grasses of the valleys and plains. It has the tenderness of the best stall-fed samples, while it acquires a flavor as delicate and appetizing as that of the wild game of the mountains, which, in respect to taste and tenderness, it certainly resembles.

"Chronic invalids are, almost always, benefited by a mere change of regimen, even if it be, in some minor respects, for the worse. If some change can be made from the humdrum of the Eastern home to the fresh and novel life of a mountain country, with its more substantial bread, more virile, blood-invigorating beef, its tempting mountain trout, and juicy wild meat, the benefits are multiplied ten-fold.

"After what has been said, specific maladies and conditions for which this climate and its accompaniments may be confidently commended need not be particularized, but will readily suggest themselves to the merest tyro in pathology. A few of the more important may be further mentioned:

"Consumptives, in the first and second stages, may come to Colorado with assurance that whatever climate, natural hygienic surroundings, pure air and water, good food, grand scenery, romantic adventure and perpetual sunshine can do for an invalid here awaits them.

"In the third and last stage, no combination of favorable influences and healthful climate, even with the aid of consummate medical skill, can avail further than to smooth the hopeless pathway to the inevitable end. Patients of this class can only be advised to come or stay according to the particular circumstances or preferences of each individual case.

"That eminent English physician, Dr. Chambers, in his incomparable lectures on the *Renewal of Life*, gives this very sensible rule respecting the choice of climate:

"'In choosing a home for your consumptive, do not mind the average height of the thermometer or its variations; do not trouble yourself about the mean rain-fall; do not be scientific at all, but find out, from somebody's journal, how many days were fine enough to go out, forenoon and afternoon. That is the test you require, and by that you may be confidently guided.'

"Judged by this standard, Colorado is one of the most favored spots on the face of the civilized globe for a consumptive's refuge. Although the sun does not glare, day in and day out, as in the heart of the African desert, but is, almost daily, softened by the interposition of blossomy clouds, there are not a score of days, in any year, in which even delicate invalids may not sit out of doors, ride or walk, forenoon and afternoon, with comfort and pleasure. Add to this the fact, already cited, that the nights are always cool, insuring plenty of restful and refreshing sleep, and two of the most essential conditions for the restoration of shattered nervous systems and broken constitutions have been secured.

"Another very important condition is the uniform dryness of the atmosphere. The air is never thoroughly saturated with moisture, as it so frequently is in every portion of the older States. There is no such thing known as "damp night air." One may sleep with doors and windows wide open, summer and winter, for that matter, without once "taking cold." Even invalids sleep on the open plains, wrapped in a pair of blankets, but otherwise unprotected, with the most perfect impunity. Everything invites to out-door life, and herein lies half the mystery of the "cures" which are credited to the country.

"Of the results in dyspepsia, and all forms of indigestion, enough has already been said. Whatever will aid the consumptive will aid the dyspeptic; for the consumptive is first a dyspeptic, and, in fatal cases, always *starves to death*.

"In patients afflicted with bronchitis the results are very flattering. Scarcely a case but is rapidly relieved.

"With regard to that scourge of the Eastern and Northern States, catarrh, there is considerable difference of opinion. In a sweeping sense, whatever benefits the general health, relieves this malady, and, in this regard, the country may be considered favorable for sufferers from catarrh. On the other hand the uniform dryness of the atmosphere is thought to aggravate many cases, by favoring the formation of incrustations or concretions, upon the inflamed mucous surfaces, and thus further irritating them. In a country where the rain-fall is so scanty and the air and ground so dry, there is also necessarily experienced more irritation from dust; but this matter is much less annoying than it would be natural to expect. Some catarrh patients report immediate and thorough relief. Others assert that their cases are rather aggravated than improved. Doubtless very much depends upon the varying constitutional conditions and general habits of the different observers.

"For all of scrofulous habit—and to the medical man, the term scrofula covers a multitude of physical sins, ranging all the way from delicate complexions and over-sensitive nervous systems to spinal complaint, sloughing ulcers, and consumption itself—there is no better climate than that of Colorado, and no country where nature so constantly invites this class of patients to recuperative efforts and occupations.

"And yet it is not enough that an invalid should come here to sit helplessly down, and wait for the climate alone to perform miracles in behalf of his restoration. All the inestimable aids of air and food and sunshine and scenery, will be lost to such as allow themselves to mope in-doors, and pine for home, and former associations, and, perhaps, for the loss of coddling habits and enervating indulgences. Let them, rather, take to the saddle, explore the parks, shoot antelope on the plains, elk in the mountains, or feast on brook trout and salmon of their own catching. If they must have business, let them keep out of office pens and away from dusty counters; let them herd their own cattle, and live half the time in the saddle and the other half under a tent or on the naked sod. While his steers, grazing as they jog slowly marketward, grow into money, the whilom, wheezy banker, or short-of-breath merchant will gain avoirdupois, chest measurement and sunburn in equal proportions.

"There is another great army of sufferers, impossible to classify, who will find this country peculiarly adapted to their rapid and thorough restoration. We refer to those who, by close application, sedentary avocations, in-door confinement, or nervous wear and tear from afflictions, financial reverses or social discordances, have become shattered in constitution, unfit for any kind of business, and tired of life. For such, here are new scenes, fresh experiences, intimate communion with nature in her most persuasive moods, rest from the world, and that best of all balms for hurt consciences and constitutions—sleep."

DENVER, COLORADO, January 10th, 1872.

To Beverley R. Keim, Gen'l Ticket Agent K. P. R. W., Kansas City, Mo.

DEAR SIR: Your request, desiring the opinion of the Medical Profession of Denver, in regard to the article on the "Influence of the Climate of Colorado upon Invalids," published in the *Gazetteer*, was handed to me through Mr. Lyman, yesterday. The Medical Association of Denver, being about to hold its regular monthly meeting, I deemed it advisable to bring the matter before the members—which was done last evening—when the article referred to was fully endorsed as per resolution enclosed.

Very truly, yours, etc.,

A. STEDMAN, Recording Secretary, D. M. A.

At a meeting of the Denver Medical Association, held on the 9th of January, 1872, the following Resolution was adopted:

"*Resolved*, That the article in the *Colorado Gazetteer*, published by Dr. Wallihan, on '*Colorado as a Resort for Invalids*,' be and the same is hereby, fully endorsed by the members of the 'Denver Medical Association,' whose names are subjoined.

"R. G. BUCKINGHAM, M. D., President.
"F. J. BANCROFT, M. D.
"H. K. STEELE, M. D.
"A. L. JUSTICE, M. D.
"JOHN ELSNER, M. D.
"J. S. DICKINSON, M. D.
"W. F. M'CLELLAND, M. D.
"W. H. WILLIAMS, M. D.
"ENG. C. GEHRUNG, M. D.
"W. H. THACKER, M. D.
"D. HEIMBERGER, M. D.
"A. STEDMAN, M. D., Recording Secretary, D. M. A."

Dr. M. MAYER MARIX, the eminent Homeopathic Physician, of Denver, gives his full endorsement of the above article in a letter dated January 9th, 1872.

SODA SPRINGS AT MANITOU.

IT HAS long been known that a trip over the Great Plains on the Kansas Pacific Railway, or a summer trip to the Rocky Mountains, is a wonderful health restorer; but the great curative powers of the Soda Springs at the base of Pike's Peak, soon destined to be the Saratoga of the West, have not as yet been widely heard of. They are situated on the line of the Denver and Rio Grande Railway, seventy-five miles south of Denver City, and are highly estimated for their virtue in the cure of rheumatism and all cutaneous disorders, and the special class for which the practitioner's sole dependence has hitherto been mercury. They were first discovered in 1846, by John C. Fremont, who, in his report of Exploration, says:

"In the upper part of a rock, which had apparently been formed by deposition, was a beautiful white basin, overhung by currant bushes, in which the cold, clear water bubbled up, kept in constant motion by the escaping gas, and overflowing the rock, which it had almost entirely covered with a smooth crust of glistening white." The best description of them is given by Professor Hayden, in his report on Colorado. He says:

"Perhaps the feature of the greatest general interest in this region is the Soda Springs, which are located about three miles above Colorado City, in the valley of Fountain creek. The scenery around them is grand beyond any I have ever seen in the vicinity of any other medicinal spring. There are four of them. The first one is close to the road, within fifty feet of the creek. For a distance of sixty feet or more around the spring, there is a deposit or incrustation in thin layers. About one hundred yards above the first spring is the second one, on the right side of the creek. This is much the largest one, and has formed a basin six or eight feet across, from the centre of which boils up a violent current. On the opposite side of the creek, not more than twenty-five feet from it, and located about ten feet above it, is a third small spring. The water is stronger than that of the others, and is used principally for drinking purposes. The fourth spring is perhaps fifty feet above the second on the right side of the creek, and within four feet of the water's edge. Its waters are rather chalybeate than otherwise. The basin of the second spring is about four feet deep, and is used for bathing. The first three springs are strongly impregnated with carbonic acid gas, and are the true springs. The temperature of the springs is about 60°."

The chief spring, christened by Professor Hayden, the "Doctor," and which is probably the richest mineral spring in the world, containing, as it does, over an ounce of medicated matter to every four gallons of water, will be called the "Doctor," or "Galen Spring." The chalybeate spring, whose waters resemble those of Pyrmont, in Europe, will hereafter be known as the "Iron Ute." The "Great Spring" will keep its present name. It will be called in plain English the "Boiling Fountain." Another, called by the Indians the "Beast," from the fact that wild beasts were wont to drink the water to heal their diseases, will be known as the "Navajoe."

The springs proper have been called "Manitou," and are distant five miles from Colorado Springs, a station on the Denver and Rio Grande Railway. A good carriage road will be constructed from the station to Manitou, and a post-office and telegraph station built. Manitou lies in the celebrated Ute Pass, from which El Paso county derives its name. The natural scenery from this point is very grand. In the background, and in the centre of the semi-circle, rises the magnificent dome of Pike's Peak; immediately in front, to the left, and about eight miles away, towers Cheyenne Mountain; and on the right is the beautiful Garden of the Gods. A hotel will be erected shortly at Colorado Springs, to cost, it is said, at least one hundred thousand dollars; and at the Springs a bottling business will be established, with apparatus for bottling the waters and saving the carbonic gas.

IDAHO SPRINGS.

THIS TOWN is situated on South Clear Creek, thirty-five miles by stage from Denver City, and is celebrated for its rich belt of gold and silver lodes, as well as for its great mineral springs. Of these latter the *Colorado Gazetteer* for 1871, gives the following description:

"These remarkable springs burst from the ground near Soda Creek, within the town limits. The temperature of the water is about 100° Fahrenheit, and the flow sufficient to supply two large swimming baths with a renewed charge of pure water every twenty-four hours. The curative properties of the water are explained in the following letter and accompanying analysis:

"'NEW YORK, July 20th, 1870.

"'I have made a careful analysis of a sample of medical mineral water from Idaho Hot Springs, of which Mr. H. Montague is proprietor. The water, as sent to me, was contained in a tin can, securely soldered, and was found to yield the following constituents, in the annexed proportions, to the gallon:

"Carbonate of Soda	30.80
"Carbonate of Lime	9.52
"Carbonate of Magnesia	2.88
"Carbonate of Iron	4.12
"Sulphate of Soda	29.36

"Sulphate of Magnesia	18.72
"Sulphate of Lime	3.44
"Chloride of Sodium	4.16
"Chlorides of Calcium and Magnesium, of each a trace	
"Silicate of Soda	4.08
"Grains	107.00

"Waters of this alkaline class occasionally contain iodine and bromine, but the small amount of water at my disposal prevented me from making an examination for these substances, which generally exist only in small proportions. The water yielded a small proportion of carbonic acid gas only. The medicinal characteristics of the spring are antacid, alterative, and in many cases, slightly laxative. Its external use as a bath will be found beneficial in cases of rheumatism and diseases of the skin.

"J. G. POHLE, M. D., Analytical Chemist."

For bathing purposes they are unsurpassed. The temperature is sufficiently high in winter to make the bath pleasantly warm, and can be regulated to suit all seasons and all classes of bathers. They were discovered by James Jack & Son, in 1860, whilst engaged in sinking a shaft to the bed-rock for gulch mining purposes. At a depth of sixteen or eighteen feet they were compelled to abandon the work, on account of the heat of the water that flooded the shaft. The prospect hole, filled with hot water, was used as a bath occasionally by citizens and travelers, but excited little attention and remained unimproved until 1863, when Dr. E. S. Cumming obtained possession of the property, and erected the building now known as the Ocean Bath House, which is owned and kept in excellent condition at all seasons by Mr. H. Montague, who, since he has had possession of the Springs, has improved the building and surroundings, and has now a swimming bath twenty-four by forty feet, and four feet in depth, the water in which is renewed every twenty-four hours from the spring; private baths for ladies, with female attendants; private baths for gentlemen, and a hot and cold shower-bath—all in first-class order, and the dressing rooms comfortable at all seasons. We have indulged in the luxury of a plunge in the swimming-bath in summer, and in the tub and shower-bath in winter, and having experienced the peculiar exhilaration and agreeable sensation that follows, must believe bathing at Idaho Springs to be beneficial to invalids and healthful to everybody. Besides the springs above described, there has been discovered near Soda Creek, a soda spring, whose waters are nearly as sparkling and effervescent as those charged with carbonic acid gas for use at soda fountains. At this watering place tourists will find first-class hotel accommodations, good liveries, and delightful drives over fine roads, surrounded by unrivalled scenery.

GO WEST AND GROW FAT.

WRITTEN FOR WESTON'S GUIDE.

Up! Eastern merchant, from your dingy counting-house;
Up! banker, from the cares of business grown morose;
Leave speculation, indigestion and unpaid bills behind—
Your lungs and stomach give a change, and wholesome rest your mind.

Where shall you go to seek this vaunted rest?
To the Emerald Occident and the far-famed West.
Across the great Sahara, (now no more,)
To the Rocky Mountains or the Pacific shore.

Avaunt! dyspepsia; cease to stuff from bilious bills of fare;
Hail! antelope steak and mountain trout, for sauce the mountain air;
Hunt, fish and shoot, for all ills a cure specific,
And soundly on the prairie sleep, with no need of a soporific.

The Kansas Pacific Road now belts the plain,
That erst made Occident and Orient twain;
With Pullman's comforts a palatial abode—
The fastest living, on the fastest road.

Gliding by day through the prairie's grassy sward,
Free from all care, by naught your pleasure marred;
While at night the Locomotive—cyclops of the hour—
Lights with his one bright eye the pathway of your tour.

"'Tis well! 'tis well!" the merchant said,
"Not over steady is my head;
"My stomach bilious, and my nerves unstrung"—
And he slowly rose, and the bell he rung.

"What, ho! Without there! Call me a hack,
"For home I'll go, and my portmanteau pack;
"This letter for passes—the last I'll write—
"For I'm off for Denver to-morrow night."

So away he sped, and as duty bids,
He took his wife and all the kids;
And they were delighted—he looked so wan—
This care-worn, dyspeptic, lean-faced man.

* * * * * * * * *

Two weeks have passed, or a month if you please,
When the very same merchant, healthy, obese,
Prepared to return, with his children and wife,
Home to his business with a new lease of life.

So stout he'd grown with the air and good things,
That the K. P. conductor was afraid of the springs;
And when to see buffalo, one side he ran to—
He was balanced on t'other with a heavy portmanteau.

When he got home he went to a shelf—
(I dare say you know how it is yourself)—
Drank a bumper to his trip on the Kansas Pacific,
And swore for all ills 'twas a cure most specific.

CLIMATE.

AS COL. R. S. ELLIOTT, Industrial Agent of the Kansas Pacific Railway, has made this subject a special study, I cannot do better than give my readers the benefit of his experience. In his "Industrial Resources," he writes as follows:

"The Plains have been so often described as a 'rainless region,' that great misconception with regard to the climate has prevailed. The absolute precipitation is much greater than has, in past years, been supposed, and is due to other causes. Meteorologists who have described the rain-fall of the Plains as derived only or principally from the remaining moisture of winds from the Pacific, after the passage of the Nevada and Rocky Mountain ranges, have been greatly in error; and the better conclusion now is, with all authorities who have given any special attention to the subject, that the moisture which fertilizes the Mississippi Valley, including the broad, grassy Plains, is derived from the Gulf of Mexico.

"Within a few years the rain-gauge has been brought into service at points distant from each other, but located at irregular intervals across the continent, and its record shows not only greater precipitation than was formerly believed to take place on the Plains, but that the distribution is unequal in time, giving us the largest proportions in the growing seasons—spring and summer.

"In his late work, 'The Mississippi Valley,' Prof. J. W. Foster says: 'The rains which water the Atlantic slope are equally distributed, the variations being very slight; while those which water the Mississippi Valley are unequally distributed, those of spring and summer being greatly in excess"—a fact, he says, "which has been overlooked by most meteorologists in reference to the geographical distribution of plants." As we pass westward from the Atlantic the inequality increases until we pass the Rocky Mountains, 'Contrasting the two stations, New York and Fort Laramie,' says Prof. Foster, 'it will be seen that on the sea-board about forty-eight per cent. of the yearly precipitation occurs during the fall and winter, while on the Plains only twenty-five per cent. occurs during that period, and that, while on the sea-board the precipitation is nearly uniform during the four seasons, *three-fourths* of the precipitation on the Plains occurs during spring and summer.'

"At Fort Riley about sixty-nine per cent. of the annual precipitation is in spring and summer; at Fort Kearney eighty-one, and at Fort Laramie seventy-two per cent. From observations at Forts Harker, Hays and Wallace on the line of the Kansas Pacific, the same rule seems to hold good. Records have not been long enough continued at these three posts to give a long average, but the mean appears to be between seventeen and nineteen inches at Hays and Wallace, and probably rather more at Harker. The actual average for 1868 and 1869 at Hays is 18.76 inches, and for the first six months of 1870 the record is 10.68 inches. At Wallace the record for 1869 was over seventeen inches, and in 1870, up to October 1st, about the same amount had fallen.

"Without records there can be only conjecture; and I can only remark that there does not seem to be much diminution in the annual rain-fall until we get as far west as the one hundred and third meridian. Thence to the base of the mountains, (except perhaps in the timbered portions of the great divide, south of the line of this railway,) the annual average may be possibly two or three inches less than in the midst of the Plains; a peculiarity explained, hypothetically, by the fact that the region 'lies to the westward of the general course of the moister currents of air flowing northward from the Gulf of Mexico, and is so near the mountains as to lose much of the precipitation that localities in the Plains east and northeast are favored with. The mountains seem to exercise an influence—electrical and magnetical?—in attracting moisture, which is condensed in the cooler regions of their summits, while the Plains at their feet may be parched and heated to excess.' This explanation may be fanciful, but the fact remains that near the mountains the rains seem to decrease north of the great divide; fortunately, however, this occurs in a region where irrigation may be applied extensively, and where there is sufficient moisture to nourish bountiful crops of grass.

"A striking difference exists between the rain-fall in New Mexico and that on the Plains. While the annual amount at Santa Fe and Fort Hays is nearly equal, the larger proportion of the rain-fall at Hays comes in *spring and summer*, while at Santa Fe it is delayed till *summer and autumn*. Hence the farmer at Hays may have his wheat crop matured in early summer without irrigation, while the same crop in New Mexico requires to be irrigated. The usual period for the nourishing rains to begin, in New Mexico, is about the first of August, a time when they are usually light on the Plains.

"Theory suggested that cereals ought to sustain themselves without irrigation, at least as far west as the head streams of the Smoky Hill River; and the President and Directors of the Railway caused experiments to be made. Wheat sown in April last matured in July, about the one hundred and first meridian, yielding merchantable grain. Maize formed ears, and oats headed well, but neither filled in a satisfactory manner, owing to the fact that the dry and hot season comes on when their grains are forming. Both can be raised as fodder to any extent desired. All along the railway, throughout the season, stalks of oats and maize could be seen growing where seed had been dropped by accident. At Cheyenne Wells, 4,179 feet above the sea-level, beans matured along the road-bed; and at First View, 4,479 feet, oats grew to the average height and matured its seed. Winter wheat, rye and barley, now on trial as far west as Pond Creek, near one hundred and second meridian, are expected to yield (and did ultimately yield.—EDITOR) well, though late sown on raw sod.

The vegetation of the Plains, along wagon tracks and railroad embankments, shows a capability of production scarcely suggested by the surface where undisturbed. Wherever the earth is broken up, the wild sun-flower (*Helianthus*) and others of the later growing plants, though previously unknown, at once spring up, almost as if spontaneous generation had taken place. Regarding changes of climate, Col. Elliott wrote in 1870, to Prof. Joseph Henry, as follows:

"I have been on the Plains all the time since early in May till this time (22nd of September). There has been much dry weather, but I have not seen one cloudless day—no day on which the sun would rise clear, and roll along a canopy of brass to the west. There has always been humidity enough to form clouds at the proper height, and on many days they would be seen defining, by their flat bottoms, the exact lines where condensation became sufficient to render the vapor visible. * * * I conclude from all this that abundant moisture has floated over the Plains to have given us a great deal more rain than would be desirable, if it had been precipitated.

"Sometimes a storm would be seen to gather near the horizon, and we could see the rain pending from the clouds like a fringe, hanging apparently in mid-air, unable to reach the expectant earth. The rain stage of condensation had been reached above, but the descending shower was revaporized, apparently, and thus arrested. * * * * * *

"These hot winds are not, so far as I have observed, apt to be constant in one place for any considerable length of time; they strike your face suddenly, and perhaps in a minute are gone. They seem to run along in streaks or *ovenfuls*, with the winds of ordinary (but rather high) temperature. They do not begin, I believe, till in July, as a general thing, and are over by September

1st, or perhaps by August 15th. Their origin I take to be, of course, in heated regions south or southwest of us; but their peculiar occurrence, so capricious and often so brief, I cannot explain to myself satisfactorily.

"I have no rain-gauge record at hand for this and past seasons; but I may remark that this season, since about the 15th of July, in these distant Plains, has given us rain enough to make beautifully verdant the spots in the prairie burnt off during the 'heated' term in July. From Kit Carson eastward the rains have been, I think, exceptionally abundant. All through the summer we have had *dew* occasionally, and it has been remarked that buffalo meat has been more difficult of preservation than heretofore; facts indicative of humidity in the atmosphere, even when but little rain-fall was witnessed. Turnips sown in August would have made a crop in this vicinity, four hundred and twenty-two miles west of the State line of Missouri. * *

"Facts such as these seem to sustain the popular persuasion in Kansas, that a *climatic change* is taking place, promoted by the spread of settlements, westwardly, breaking up portions of the prairie soil, covering the earth with plants that shade the ground more than the short grasses; thus checking or modifying the reflection of heat from the earth's surface. This fact is also noted, that even where the prairie soil is not disturbed, the short buffalo grass disappears as the 'frontier' extends westward, and its place is taken by grasses and other herbage of taller growth. That this change of the clothing of the plains, if sufficiently extensive, might have a modifying influence on the climate, I do not doubt; but whether the change has been already spread over a large enough area, and whether our apparently, or really, wetter seasons may not be part of a cycle, are unsettled questions.

"The civil engineers of this railway believe that the rains and humidity of the Plains have increased during the extension of railroads and telegraphs across them. If this is the case, it may be that the mysterious electrical influence in which they seem to have faith, but do not profess to explain, has exercised a beneficial influence. What effect, if any, the digging and grading, the iron rails, the tension of steam in locomotives, the friction of metallic surfaces, the poles and wires, the action of batteries, etc., could possibly or probably have on the electrical condition, as connected with the phenomena of precipitation, I do not, of course, undertake to say. It may be that wet seasons have merely happened to coincide with railroads and telegraphs. It is observed that the poles of the telegraph are quite frequently destroyed by lightning; and it is probable that the lightning thus *strikes* in many places where, before the erection of the telegraph, it was not apt to strike, and perhaps would not reach the earth."

"These remarks," says Col. Elliott, "were sent to the distinguished meteorologist, Prof. Henry, rather to draw the attention of his cultured mind to the phenomena than to assert a theory. Yet there are facts which sustain the popular notion of a climatic change, manifested in a humid atmosphere, in greater rain-fall, and a change of vegetation. A gentleman who has given much attention to meteorology writes me, that he is not satisfied that settlements have sufficiently changed the surface of the country west of the Missouri to affect the climate. 'The increased rains,' he says, 'I apprehend are due to extra-mundane or cosmic influences, not yet understood.'

"It is certain that rains have increased; this increase has coincided with the increase of settlements, railroads and telegraphs. If influenced by these, the change of climate will go on; if by extra-mundane influences, the change may be permanent, progressive or retrograde. I think there are good grounds to believe it will be progressive. Within the last fifteen years, in Western Missouri and Iowa, and Eastern Kansas and Nebraska, a very large aggregate of surface has been broken up, and holds more of the rains than formerly. During the same period modifying influences have been put in motion in Montana, Utah and Colorado. Very small areas of timbered land west of the Missouri have been cleared—not equal, perhaps, to the area of forest, orchards, and vineyards planted. Hence it may be said that all the acts of man in this vast region have tended to produce conditions on the earth's surface ameliorative of the climate. With extended settlements on the Arkansas, Canadian, and Red River of the South, as well as on the river system of the Kaw Valley and on the Platte, the ameliorating conditions will be extended in like degree; and it partakes more of sober reason than wild fancy to suppose that a permanent and beneficial change of climate may be experienced. The apalling deterioration of large portions of the earth's surface, through the acts of man in destroying the forests, justifies the trust that the culture of taller herbage and trees, in a region heretofore covered mainly with short grasses, may have a converse effect. Indeed, in Central Kansas, nature seems almost to precede settlements by the latter grasses and herbage."

TREE GROWTH ON THE PLAINS.

ON THIS subject, Col. Elliott writes as follows: "The principal native trees on the Plains, west of the ninety-seventh meridian, are, Cottonwood, (*Populus Canadensis*,) Hackberry, (*Celtis Occidentalis*,) Walnut, (*Juglans Nigra*,) Plum, (*Prunus Chickasa*,) Elm, (*Ulmus Americana*,) Red Cedar, (*Juniperus Virginiana*,) and Box Elder (*Acer Negundo*). To these may be added Willow (*Salix*,) and grape vines, and also the Locust (*Robinia Pseudacacia*,) and Wild Cherry (*Cerasus Virginiana*,) mentioned by Albert as occurring on the Purgatory. The Black Walnut extends to the one hundredth meridian; how much further I am unable to say. The Elm and Ash are of similar—perhaps greater—range. Hackberry has been observed west of the one hundred and first meridian. Cottonwood, Box Elder, Red Cedar, Plum and Willow are persistent to the base of the mountains. The extensive pine forests (*Pinus Ponderosa*) on the "Great Divide" south of Denver, although stretching seventy to eighty miles east from the mountains, is not taken in view as belonging to the Plains proper. Its existence, however, suggests the use of its seeds in artificial plantations in that region. Settlers in the pinery or its borders would do well to protect portions of the forest by inclosure, and if possible against fire, as by suitable care the forest could be made perpetually remunerative and reproductive.

"The fossil wood, imbedded in the cretaceous strata, in many parts of the Plains, is left out of consideration, as belonging to a previous, though recent, geological age; but the single specimens of trees, found growing at wide intervals, are silent witnesses to the *possibility* of extended forest growth. These living trees suggest at once, by their location, the feasibility of their increase, and the *reason of their scarcity*. They are *usually* found near water; and hence we conclude that in order to grow trees we must break the grounds so deeply as to save all the rains for their use. They are *always* where they are protected from fires; and hence we conclude that if we can protect our plantations from fires we can grow forests.

"Were it possible to break up the surface to a depth of two feet, from the ninety-seventh meridian to the mountains, and from the thirty-fifth to the forty-fifth parallel, we should have in a single season, a growth of taller herbage over the entire area, less reflection of the sun's heat, more humidity in the atmosphere, more constancy in the springs, pools and streams, more frequent showers, fewer violent storms, and less caprice and fury in the winds. A single year would witness a changed vegetation and a new climate. In three years (fires kept out) there would be young trees in numerous places, and in twenty years there would be fair young forests.

"Nor is this view inconsistent with the conclusion of meteorologists, that our prairies and open plains are due to scanty precipitation. This is the *cause*; not, however, because the absolute moisture is not enough to sustain tree growth, but because it is not enough to protect destruction by fires. Throughout the prairies—the 'Illinois region' of Prof. Cooper's campestrian province—whenever the fires are checked, tree growth begins. Given immunity from fires on the Plains, and to a great extent, they will clothe themselves with shrubs and trees, even without a breaking up of the surface.

"The limited area which it is in our power to turn up with the plow, will have the same results in kind to follow a breaking of the entire surface, but less effective than if the operation were universal. Yet a beginning can be made by the Railway Company and by individuals. In fact, it is already in progress by settlers, a degree and a half west of ninety-seventh meridian. A few acres at intervals across the plains, or only a few clumps of trees growing without irrigation, will be a demonstration more effective than theory."

"In this great work the United States ought to lead, either by forests planted at the cost of the treasury, or by subsidies to individuals or companies. It is a work worthy of the age and of the nation."

The foregoing remarks were written in December, 1870. Since then actual experiments have been made, by Col. Elliott, by order of the President and Directors of the Kansas Pacific Railway, the results of which are shown by the following extracts from a paper read by him at a late meeting of the Illinois State Horticultural Society:

The immense region lying between the ninety-seventh meridian of West Longitude and the Rocky Mountains has in the past been regarded as an unprofitable feature of our geography, interposing vast distances between settled portions of the continent, but itself of little or no economic value. Its possible future usefulness as a pastoral domain had been suggested by Gilpin and others, but the day was believed to be very remote for its actual occupancy. In 1869, the completion of the Kansas Pacific Railway, with a general course along the twenty-ninth parallel, to a point nearly five hundred miles from Kansas City, and its rapid progress towards Denver, (reached in August, 1870,) brought in question the capabilities of the country.

Was it to remain forever an unsettled waste? Or was it, in fact, capable of usefulness beyond previous conception?

The President of the Railway Company, Hon. John D. Perry, and the intelligent gentlemen associated with him as managers, remembered that when the track was laid to Salina, one hundred and eighty-five miles from Kansas City, it had been thought by many that the utmost verge of productive territory in general agriculture had been reached; but they also knew that settlement had already extended to Ellsworth, forty miles beyond, and the inquiry presented itself whether settlement might not be extended still further Westward. Stretching for four hundred miles west from Ellsworth was the traditional desert. Every square mile that could be reduced to productiveness must be of value, not only to the Railway Company, but to the general public, and in view of the large interests involved, the President and Directors of the Railway ordered experiments with grain, grasses, trees, etc., to be made along the line. Trials have accordingly been made at three points, distant from Kansas City, and above the level of the sea, as follows:

Stations.	West from Kansas.	Above Sea Level.
Wilson	239 miles.	1,586 feet.
Ellis	302 "	2,019 "
Pond Creek	402 "	3,175 "

GRAINS AND GRASSES.

At Pond Creek, wheat and barley sown 28th September, 1870, suffered from the winter and also by the depredations of prairie dogs, but the plants surviving, headed out well and matured fair grain. Rye sown at the same time made a crop that would have been regarded as good even in Illinois or Missouri.

At Ellis, the same grains, sown 20th October, were in full promise on 1st June, when a severe hail storm leveled every plant to the ground.

At Wilson, the same grains, sown as late as 11th November, made a yield equal to the average of the Western States.

All these trials were on ground broken in 1870. At Pond Creek and Ellis, the seed was sown on the fresh turned sod. At Wilson the sod had been turned in June, and the ground was re-plowed before sowing.

At the places named trials have shown that sorghum, lucerne, timothy, clover and Hungarian grass may be regarded as future forage crops on the plains; the first and last named being the most promising. Maize can be grown at each place for fodder, and for grain at Wilson and Ellis.

Winter wheat promises better than spring wheat. The latter, in 1870, tried in a small way at Carlyle station, 376 miles west of Kansas City, matured merchantable grain; but winter wheat is more vigorous on the plains. An immense tract of Central Kansas is believed to be capable of producing winter wheat with less labor, and of greater yield to the acre, than in almost any other part of the Union. Returns varying from fifteen to thirty-five bushels for one sown are common. At the present time wheat, rye and barley, sown in September last at Ellis, will compare favorably with the same grains in other localities in Western or Eastern States.

TREES FROM SEED.

In November, 1870, there were planted at Wilson, seeds of Ailantus, Chestnut, Oaks, Peach, Pecan, and Pinon, or New Mexican Nut Pine. These seeds germinated in the spring of 1871, and have made a fine growth, except the Pinon, which failed. The Ailantus and Peach have attained a height of thirty to thirty-six inches, and the Oaks, Chestnut and Pecans from four to twelve inches.

In the spring of 1871, there were planted at Wilson, seeds of Ailantus, Catalpa, Elm, Locust, Silver Maple, Osage Orange, and Black Walnut. All have done well, equaling the ordinary growth of nurseries. The Elm and Maple seeds had ripened in Missouri in the last days of April, and were planted in May.

Seeds of Ailantus, Locust, Honey Locust, Elm and Maple, planted at Ellis, had come up well, but the plants were nearly all destroyed by hail on the 1st of June. Seeds of Ailantus planted during the first week in June made encouraging growth.

Seeds of Ailantus were sown broadcast at Pond Creek, and produced trees from four to twelve inches, nearly all of which passed safely through the summer.

The experiments with tree seeds were limited, but were sufficient to show that trees may be grown from seed on the Plains.

CUTTINGS.

Lombardy Poplar, White Poplar, Cottonwood, and White and Golden Willow, were grown at Wilson from cuttings, and the three last also at Ellis. At Wilson some of the shoots from cuttings reached a length of thirty-six inches.

TRANSPLANTED TREES.

Trials of the following were made at Wilson:

Evergreens.—White Pine, Scotch Pine, Norway Spruce, Austrian Pine, Red Cedar.

Deciduous Trees.—Ailantus, Silver Maple, Ash, Sycamore, Maple, Box Elder, Osage Orange, Catalpa, Lombardy Poplar, Chestnut, White Poplar, Cottonwood, Tulip Tree, Elm, White Willow, Honey Locust, Golden Willow, European Larch, Black Walnut, Linden.

All of the foregoing have done well at Wilson, making growth equal to what is usual in Eastern Missouri.

On the 18th of August, Rev. E. Gale, of the Kansas State Agricultural College, (a gentleman practically acquainted with tree culture,) visited Wilson to examine the trial farm. In his report to the College, he states the growth from actual measurement, as follows:

"*Ailantus.*—Seedlings, fall planted, with cultivation, have grown from twenty-four to thirty inches; spring planted, or rather sown upon sod broken last November and harrowed in, have grown from three to twenty-one inches; transplanted one year have made a vigorous growth of more than four feet.

"*Ash, White*—Transplanted one year old trees have grown from ten to sixteen inches.

"*Catalpa.*—Seedlings, on sod, without cultivation, from three to twelve inches; transplanted, twenty-four inches.

"*Box Elder.*—Transplanted from thirty-six to forty inches.

"*Chestnut.*—Seedlings five to twelve inches; transplanted nine to fifteen inches.

"*White Elm.*—Seedlings ten to twenty inches; transplanted twenty to thirty inches.

"*Black Locust.*—Seedlings, three and a half to four feet.

"*Honey Locust.*—Seedlings sixteen to twenty-four inches; transplanted three to three and a half feet.

"*Larch, European.*—Transplanted six to twelve inches.

"*Maple, Soft.*—Seedlings twelve to twenty-four inches; transplanted twenty-four to thirty inches. Sycamore-leaf, transplanted, twelve to twenty-four inches.

"*Oak.*—Seedlings, eight to ten inches.

"*Osage Orange.*—Seedlings twelve to twenty inches; transplanted one to three feet.

"*Pecan.*—Seedlings four to nine inches.

"*Peach.*—Seedlings thirty inches; transplanted three to four feet.

"*Cottonwood.*—From cuttings twenty-four inches; transplanted three to five feet.

"*Linden.*—American, transplanted, nine to eighteen inches.

"*Poplar.*—White, from cuttings twelve to twenty-seven inches; transplanted twenty-four to thirty-six inches. Lombardy, transplanted, twenty-four to thirty-six inches.

"*Willow.*—White, from cuttings twenty-four to thirty-six inches; transplanted three to four feet. Golden, transplanted, three to four feet.

"*Tulip Tree.*—Transplanted has made about ten inches growth.

"*Walnut.*—Seedlings twelve inches; these have grown here without cultivation by just planting into the sod after breaking, and leaving them to care for themselves; transplanted, these are all living; but have made only six to eight inches growth.

"*The Evergreens*—Havé nearly all lived, and have made a growth of from four to eight inches. All have done well. Nothing in the appearance of these trees to discourage the planting of evergreens in Kansas."

Transplanted trees of the same kind as at Wilson, except Red Cedar and Cottonwood, were tried at Ellis; and notwithstanding that the hail storm of June 1st had greatly damaged them, the trees, with the exception of Larch, Chestnut, Norway Spruce and Corsican Pine, did remarkably well. A second trial of Larch and Chestnut, with better treatment at planting, and good cultivation, would probably result in success. Osage Orange promises well for hedge and timber. A memorandum made at Ellis, on the 22d of August, shows:

	Planted.	Growing.
Aliantus	74	74
Ash	110	110
Box Elder	108	102
Catalpa	9	9
Honey Locust	99	99
Elm	81	76
Lombardy Poplar	50	48
White Poplar	40	40
Silver Maple	53	51
Tulip Tree	10	9
Black Walnut	84	80
Scotch Pine	33	24
White Pine	33	10
Austrian Pine	33	20

At Pond Creek—certainly one of the most forbidding spots on the plains—the growth of some kinds of trees was very encouraging. Aliantus, Ash, Box

Elder, Catalpa, Honey Locust and Osage Orange did best. Elm and Black Walnut survived the summer, with moderate growth. Silver Maple grew tolerably, but suffered somewhat in foliage from the winds. Chestnut, Larch and most of the evergreens failed; but a few of the pines lived, and in another season will probably do much better. Lombardy and White Poplars, and White and Golden Willows, made but feeble growth. In addition to great atmospheric avidity, the trees at Pond Creek had also the disadvantage of unfavorable soil.

IRRIGATION.

These experiments were all without irrigation. Not one drop of water was applied by human agency, either before or after planting, except to soften the seeds or to puddle the roots of the trees as they were set out. The object was, to test the possibility of growing trees and other plants, depending only on the rain fall; not because irrigation would not be beneficial, but because it would, in many parts of the plains, be difficult to apply, except at a cost beyond the means of the average settler. The leading interests of the plains will be cattle, horses and sheep; but it was deemed important to show that the settler may adorn his home with trees, may grow his timber, may fill his stock yard with nutricious fodder, and may raise all the grains and other food needed for his live stock and his family, without resort to costly processes of artificial watering.

As wealth shall increase, and population shall begin to equal the food production attainable with present modes of cultivation, we may expect that under-drainage and irrigation will be largely brought into use, in all parts of the west now settled, in order to guard against failure of crops in any season; and when that day shall arrive, the same necessity for large and certain production will justify outlays to provide irrigation, in many parts of the great Plains. But in the meantime, each succeeding year will show that much more can be done without irrigation than has heretofore been believed possible.

INDIVIDUAL EFFORTS.

When in June, 1870, the plow was first put in the ground at Wilson, there were but one or two settlers within sixteen miles of that point. But since that time many homestead and pre-emption claims have been taken on public lands, and land has been largely purchased of the Railway Company, even as far west as Ellis, or about eighty miles beyond the point reached by settlements in June, 1870. Dr. Lewis Watson, having purchased for himself and associates, five sections of land at Ellis, began to break prairie in April last, and raised corn, sorghum, Hungarian grass, broom corn, peanuts, pumpkins, squashes, melons, sweet potatoes, etc., with such success as to secure for products exhibited a special testimonial at the Kansas State Fair, in September. Specimens of his products, and also trees, grain, etc., from the trial farms of the Railway Company, attracted much attention at the St. Louis Fair.

The "Frontier Farm" of Hon. John H. Edwards, at Ellis, contributed to the splendid collection of agricultural products at the Kansas City Exposition, held in October. No feature of that truly magnificent Exposition drew more attention or elicited more favorable comment, than the products of the "Great American Desert."

TREE PLANTING ON THE AMERICAN DESERT.

WRITTEN FOR WESTON'S GUIDE BY

DR. WARDER, OF OHIO.

IN RENDERING HABITABLE the great Plains that lie west of the Missouri River, a great work is to be done. The most urgent necessity is the presence of forests—trees must be planted; their well known influence in checking the force of winds, and in equalizing and ameliorating the climate, cannot fail to produce the happiest effects. The soil is naturally good over vast areas, lacking only a sufficient amount of moisture to render it abundantly fertile and plentiful.

The extensive planting of forests will produce the desired effect, and may exercise an influence upon the whole region of the great Valley of the Mississippi.

These results are believed possible—nay, probable; and supposing them also to be practicable, it has for many years been hoped that so great an enterprise—one of such national importance, benefiting the whole country, and rendering vast tracts of the public domain attractive to travelers—would have been fostered and executed by the General Government. It was impossible to effect anything by private enterprise in a land of Indians and buffaloes. The reclamation of the wilderness was deserving of the fostering care of a wise and powerful nation.

Perhaps we were not then prepared for the work—we had so much unoccupied public lands, that it seemed as though these regions could never be required for settlement. All this has been wonderfully changed, however, in these last years, by the events of the times. The two great oceans have been united by iron bands that cross these vast plains. The subsidies of lands granted to the railroad companies are now rendered acceptable to the settler, and the Government has the benefit and assistance of a great private interest to aid in bringing its reserved lands into market.

The Kansas Pacific has wisely taken the initiative in the matter of timber planting, having employed a gentleman of great intelligence, and one familiar with practical agriculture, to carry on the work. Col. R. S. Elliott is called the "Industrial Agent," and his duty has been to demonstrate the possibility of growing cereals and esculent crops, far out along the line of the road, in advance of the settlements, and also to plant various kinds of trees beyond the limits of the natural timber and on the open plains.

Col. Elliott's experiments have already been eminently successful, and have demonstrated that planting can be done to advantage. His operations have, so far, been conducted on a small scale at each place, it is true; but even these small beginnings should give great satisfaction to him and to every lover of his country, since they have demonstrated what can be done in the way of agriculture upon the great American Desert.

Col. Elliott has very wisely selected the most hardy trees as pioneers; after these shall have been established in their new homes, they will serve as nurses for more desirable and more tender varieties, which will no doubt succeed equally as well when they have the benefit of the shelter of these hardy pioneers.

The native Cottonwoods, Elms, and Box Elder very naturally present themselves for the first plantations. They are easily produced, easily procured, and they are natives, found where protected along the streams, farther out in the Plains than any other trees. The thrifty, hardy characters, and the rapid growth of the Catalpa and Ailantus, have recommended them especially to Col. E., who has succeeded in producing them from seed. They have made a good growth the first year at the experimental stations.

The western maple (*Acer Dasycarpum*) has done well, and is a rapid grower. Its western limit is Manhattan, Kansas, at the mouth of the Blue river.

The European Larch has been tried to some extent in several places, and is generally doing well. It will no doubt succeed in dry soils, but planters must recollect that it requires to be set out very early, before its precocious buds begins to swell; and also, that in loose soils, the earth should be very closely packed—even *tamped*—upon the roots. Moreover, transplanted trees should be selected in preference to those taken directly from the seed-bed. These will be worth more than their enhanced price, and will more certainly survive. American grown trees of this species may be had in better condition than those which have been imported from Europe. The American Larch, being a swamp tree, is unfitted for an arid country.

The Osage Orange (*Maclura*) has grown well from seeds. This tree is nearly a native of Kansas, and therefore must do well. It is thriving everywhere. The timber is heavy, hard and strong, and among the most valuable for many purposes in the arts. Its chief use, for planting in the Plains, however, may prove to be as a windbreak or shelter, and also as a hedge plant, for which purpose it is pre-eminently adapted.

The Honey Locust (*Gleditschia*) and the Black Locust (*Robinia*) though belonging to very distinct genera, have been confounded by some on account of their familiar name, Locusts. Both of these trees have been planted, and both are valuable, but the borers have seriously damaged the Black Locust, and threaten to destroy it, until other trees may eventually protect it from these insects.

Walnuts, Hickories, Elms, Oaks and Chestnuts have also been tried to some extent, by sowing the seeds; some of these were found doing well as far west as Pond Creek, near the one hundred and second meridian.

The Oaks are rare in Western Kansas, and are represented by few species. They are now found on the Arkansas and its tributaries, to the south of the Kansas Pacific Road. In the eastern portion of the State, however, they abound. The Burr Oak especially deserves attention, and should be extensively cultivated. The natural growths of this tree and of the Black Walnut in the Kaw bottoms as far west as Junction City, and perhaps all along the Republican and Smoky, are exceedingly promising; but nature's planting is too wide, and they need the introduction of cottonwoods and maples, thickly planted, to give them an upright growth.

Hickories and Buttonwoods are not found west of Chapman's Creek, on the north, nor of Turkey Creek on the south of Smoky, though rather abundant to the eastward. The former should be planted, especially the Pecan nut, in the bottom, but the Buttonwood does not attain its true proportions in the natural growths.

Among the Evergreens, the Red Cedar should be a prime favorite in the pioneer plantations. It is found, where sheltered from fires, in the ravines of the bluffs all the way to the Rocky Mountains.

The Scotch, the Austrian, and the White Pine bid fair to succeed, and we found specimens of each promising well, in Col. Elliott's plantations. All are exceedingly hardy, and appear almost indifferent as to soils.

The attention of the great railway corporations is earnestly directed to these initiative experiments, which, under the most unfavorable circumstances, have already given so great promise as to future success in tree planting on the Plains.

For timber planting in Kansas, the following suggestions may prove useful:

IN OPEN PLAINS.—Ailantus, Cottonwood, (on porous subsoils,) Box Elder, Maclura, Silver Maples and Elms, (where not too dry). All these as nurses and pioneers, to be followed by other trees as adapted to the soils.

ON DEEP SOILS, RIVER BOTTOMS.—Elm, Ash, Black Walnut, Burr-Oak, Cypress, Coffee-nut, Maclura, Pecan-nut, and Cottonwood *as a nurse.*

ON DEEP SOIL, UPLAND.—Maples, Ash, Wild Cherry, Oaks, Honey Locust, Coffee-nut, Maclura, Pecan, Hickory, Tulip Tree, (especially on loose soils.)

ON HEAVY SOILS.—Burr Oak, White Oak, Yellow Oak, Post Oak, Hickories, Cedars, Pines, and Spruces.

ON ROCKY PLACES, RIVER BLUFFS.—Chestnut (invaluable), Pines of Sorts, Spruces, European Larches, Black Locust (experimentally).

ON SANDY SOILS.—Pines, Spruces, Cedars, Larch, Red Oaks (sorts).

PLANTING.—After thorough breaking of the land, set the young trees or plant the seeds thickly; every four feet in squares, or every two feet in rows, six feet apart. The latter plan may be best for some kinds that grow slowly at first, and when it may be an object to use the land for other crops for a few years. Thus with the Walnut, Hickory and Oaks the seed may be planted in rows twelve feet apart, and two rows of corn may be planted between them for two or three years, and so on. As the young trees begin to grow vigorously, set an intermediate row of some rapidly growing tree, such as cottonwood or the soft maple, which will be six feet from the original rows. These will serve for nurses to force the more valuable kinds into an upright form. When this has been effected, they are to be gradually removed.

A similar plan may be adopted with Pines, Spruces, Chestnuts, and other kinds that are too costly to plant thickly at first, but care must be had that the nurses do not smother the more valuable kinds with their excessive growth.

THE POOR MAN'S TREE.

THE PREVAILING tree along the river and creek bottoms of Kansas is the Cottonwood. It is the easiest of propagation, and as a general ignorance as to its real worth seems to prevail, the following remarks on the subject by Col. Elliott will be of use and interest:

There is no mistake about the value of this native son of Kansas—*Populus Canadensis.* If he were a stranger, introduced under his stately botanical name, with a tree pedler's picture, and all that sort of thing, everybody would want the "Populus Canadensis;" growing so easily from cuttings (or seed, if you can get them before they fly), and growing everywhere; persistent across the plains, in all localities where the earth is moist enough to start the seed, and shelter is had from fire and herd. Not first rate for timber, but valued where trees are more abundant than in Kansas. Emphatically the poor man's tree; for he can gather the cuttings, and plant his wind-break, in the time he takes to sit about and mourn that he has no trees.

I suppose that some who will see this, believe they know all about Cottonwood. Perhaps they do; but as I am not the man who "knows it all," about anything, I am constantly learning. At Manhattan, in January, Mr. Gale handed me a slip written in pencil: "There are two kinds of Cottonwood, the *yellow* and the *white.* The yellow is much the best for timber." Away out on the north fork of Smoky, five miles north of Sheridan, I measured a Cottonwood stump last summer four feet and a half across; but I had never before heard of the two kinds of Cottonwood. As Arthur Bryant is getting out a book on forest trees, intended for the use and benefit of Western farmers, I wrote to him inquiring about Cottonwood. He replied:

"The variety of Cottonwood spoken of by Mr. Gale, I think must be what we call the yellow Cottonwood. I have never seen it mentioned in any publication. I once wrote to Dr. George Vasey in regard to it, but he knows nothing about it. In 1834 I covered my log cabin with shingles made from it, splitting them two feet long. They lasted till the cabin was pulled down, twelve or fifteen years afterwards. When I first came to the West, in 1830, I was informed in St. Louis that the old French settlers made shingles from the Cottonwood. I have known it to be sawed into clapboards for covering houses. It does not warp badly like the common sort. If I were to propagate the Cottonwood, it would be this variety."

There is some advantage in smoking. In the smoking car of the Missouri Pacific, on my last trip up from St. Louis, I sat beside the owner of a saw mill and planing machine at South Point, Missouri. He told me that he cuts up the yellow Cottonwood for cracker boxes, and Sycamore for tobacco boxes. The yellow, he said, he had used for weatherboarding, and regarded it as fully equal to pine for that purpose; also that it is used for furniture, but he finds a demand for all he can get to put into the shape of cracker boxes. For this it is better than pine, as in thin boards it does not split so readily as pine. In the smoking car again, west of Jefferson City, I sat by another man with a saw mill. He said that the *white* Cottonwood could be used to advantage for fence boards, though given to warping; and that for weather-boarding, inside finish, furniture, etc., he had long made use of the *yellow* Cottonwood; that the difference in the trees was well known to mill men, and that persons who cut logs can tell the trees at sight. He was a plain man, but practical; and he thought that if we could grow the Cottonwood at will in Kansas, we are not so bad off for prospective forests after all.

In July last I had a letter from William Saunders, Esq., the well-known superintendent of the United States experimental garden at Washington City, relative to trees to be tried in Western Kansas. He said: "Easily grown and rapidly extending species should be the first choice," and put the Cottonwood *first* on the list. He also named Willow, Silver Maple, Box Elder, Catalpa, Osage Orange and European Larch. Mr. Saunders is good authority.

I never ride a hobby. I only press the Cottonwood so earnestly, because it is a valuable tree, native to the State, and within reach. This is very important. The poorest farmers (in money) can, by industry, get this tree, and they might not be able to get any other. Cuttings in large quantities can be had at $1.00 a thousand along the Missouri river; perhaps cheaper. The seed may be troublesome to gather. John Owens, of Saline county, wrote me last summer: "I am alive on the subject of tree planting, and regret that I did not begin sooner. I tried to find walnuts the last three falls around here, but they were too scarce. Last spring I dropped Cottonwood branches in the furrows and covered with the plow. They grew—I will try more." This is the way to look at it. Try more. I had the pleasure to fill orders from Mr. Owens for walnuts last fall, and no doubt he will "try more" of these, too.

Samuel Edwards, of La Moille, Illinois, writes: "The Cottonwood and Lombardy Poplar have been planted to a considerable extent. They are rapid growers; in a short time answer well as a screen. * * * They are easily propagated from cuttings, eight inches long, taken off before the sap starts in the spring, planted in thoroughly pulverized soil, leaving one bud above the surface. Care should be taken to press the earth firmly about the lower ends of the cuttings." Remember this: press the earth firmly about the lower ends of the cuttings. As to pulverizing the soil, all "old ground" in Kansas is apt to pulverize itself.

PRODUCTS ALONG THE LINE OF THE KANSAS PACIFIC RAILWAY.

DURING THE Eleventh Annual Fair of the St. Louis Agricultural and Mechanical Association, and of the Great Exposition at Kansas City, both held in October last, the Kansas Pacific Railway exhibited a display of fruits, cereals, vegetables, trees and various products raised along the line, both from the more settled parts of the country and from that part hitherto absurdly known as "the Desert." At the St. Louis Fair, which was visited by over one hundred and fifty thousand people, great attention was attracted and much surprise expressed, clearly showing to the exhibitors how profoundly ignorant are the people from the East with regard to the capabilities of this country. At the Kansas City Exposition, though so much nearer home, but little less astonishment was shown at the magnificent display made. The following is from the *St. Louis Democrat* of October 3d, 1871:

"One of the most interesting and at the same time most novel displays, is made by Mr. W. Weston, of the Kansas Pacific Railway Company. He shows products of the "Great American Desert," which consist of corn, wheat, sorghum, Hungarian grass, and young trees raised on the experimental farm at Wilson Creek Station, two hundred and forty miles west of Kansas City, Mo., by Col. Elliott, Industrial Agent of the Company, together with specimens of all the natural grasses incidental to that district, and broom corn, sorghum, peanuts, squashes, etc., raised at Ellis, three hundred miles west of Kansas City, without irrigation. The seedling trees exhibited, which were also raised by Col. Elliott, at Wilson's Creek, would do credit to any Eastern nursery. He has a sod of buffalo grass upwards of a foot thick, showing the verdure and the soil, which is of much interest to the many who are now looking toward the far West. On each side hangs a buffalo horn, containing a bouquet of grasses, and forming a very effective and novel cornucopia. The whole is surmounted by the head of an enormous old buffalo bull, who looks grimly down over the products of his native heath so lately wrested from him. Altogether we consider Mr. Weston's display as rather a hard joke on the authentic geographies that told us in our youth of the "Great American Desert" extending from Kansas City to the Rocky Mountains. In conjunction with the agricultural, is represented the passenger department of the road by two very handsome bulletin boards, having for a heading a hand-painting of a train crossing the prairies on the line of the Kansas Pacific Railway with a herd of buffalo in the foreground. The *tout ensemble* of this display was very tasty and attracted much attention."

The following is what the *Kansas City Bulletin* said of the display at the Great Exposition:

We must be allowed to refer again to the products along the Kansas Pacific Railway, being exhibited under charge of Mr. Weston. The display is not surpassed by anything on the grounds, which may seem strange to those whose geographies have taught them that the country through which the road passes is one vast, sandy "desert."

The first thing that strikes the attention is a pie-melon, from Abilene, which measures about two feet in length, and not less than ten inches in diameter, and weighs fifty-four and a half pounds. Accompanying this is a group of three beets, one of which measures at least twelve inches in length and another seven inches in diameter. We have not seen finer beets on exhibition anywhere. We have, also, from the same locality, a lot of radishes from ten to twenty-four inches long, and measuring four to six inches in diameter. Next we notice pumpkins from Ellis, three hundred and two miles west of Kansas City, measuring from sixteen to twenty inches in diameter and looking decidedly fat for the products of the "Desert." In this line we find, also, a pumpkin from Topeka, Kansas, which measures about eighteen inches from blossom to stem, and nearly twenty-four the other way, and one squash from the same place measuring two feet in length and about fifteen inches in diameter.

We find also two varieties of potatoes from the same place, a box of each, nearly every one of which are as large as a man's fist. Of potatoes we find, also, a fine collection from Abilene, Kansas, which, while not so large as those previously mentioned, are large enough to attest the richness of the soil in which they grew, and as large as anybody would care for, for ordinary use.

From Abilene, we find also a sack of wheat, large, plump, full grains, and forty-four and a half pounds to the bushel.

From Wilson Creek, two hundred and forty miles west of Kansas City, the heart of the "Great Desert," we find a sample of soil, a block twelve inches square and eighteen inches deep. It don't look much like desert soil, but is a dark alluvial, resembling more the rich soil of the Missouri bottom than any other with which we have come in contact. It is covered with Buffalo grass, which looks vigorous, healthy and rich. We have some specimens of bottom grass, grown at the same place, which has a strong, rich-looking blue stem, nutritious blades, and heads of seed eight or ten inches long. The whole stock measures not less than six feet. We find also specimens of rye, from Wilson, three and a half feet long, with heads four inches long. Hungarian grass three feet long, with large heads three inches long. Smooth headed wheat three feet long with plump heads two and a half to three inches long, and a variety of grasses taken from all the different kinds of soil about Wilson—upland and bottom—which demonstrate the richness of the ground and what we may hereafter expect from the agriculture of that country. We cannot pass Wilson, however, without noticing particularly some samples of sod corn which cannot by any means be considered "nubbins," being plump, well-filled ears of six and eight inches length, and containing from twelve to sixteen rows of grains. We have seen worse corn grown on old ground in the Missouri bottom.

Along with this showing of products, we find a variety of samples of the products of Colorado, sent here by the Executive Committee of the Agricultural Society of that Territory. Among which we find Sonora wheat—large, plump, white berry; winter wheat, equally large and plump and heavy, but a shade darker; barley and rye, as fine samples as any in the Exhibition; Norway and White Russian oats which no State can beat, and some samples of sweet potatoes, eight to ten inches long and three inches in diameter.

Irish potatoes, beets and onions also represent the rich soil of Colorado, and in size and general fine appearance silently defy the States to show finer progeny than does the soil of their own native mountain Territory.

Colorado also sends samples of wheat, rye, oats and grasses in the straw. The grains measure about five feet, and have well-filled heads, three or four inches long. The grass is about three feet long, and looks dank, rich and nutritious.

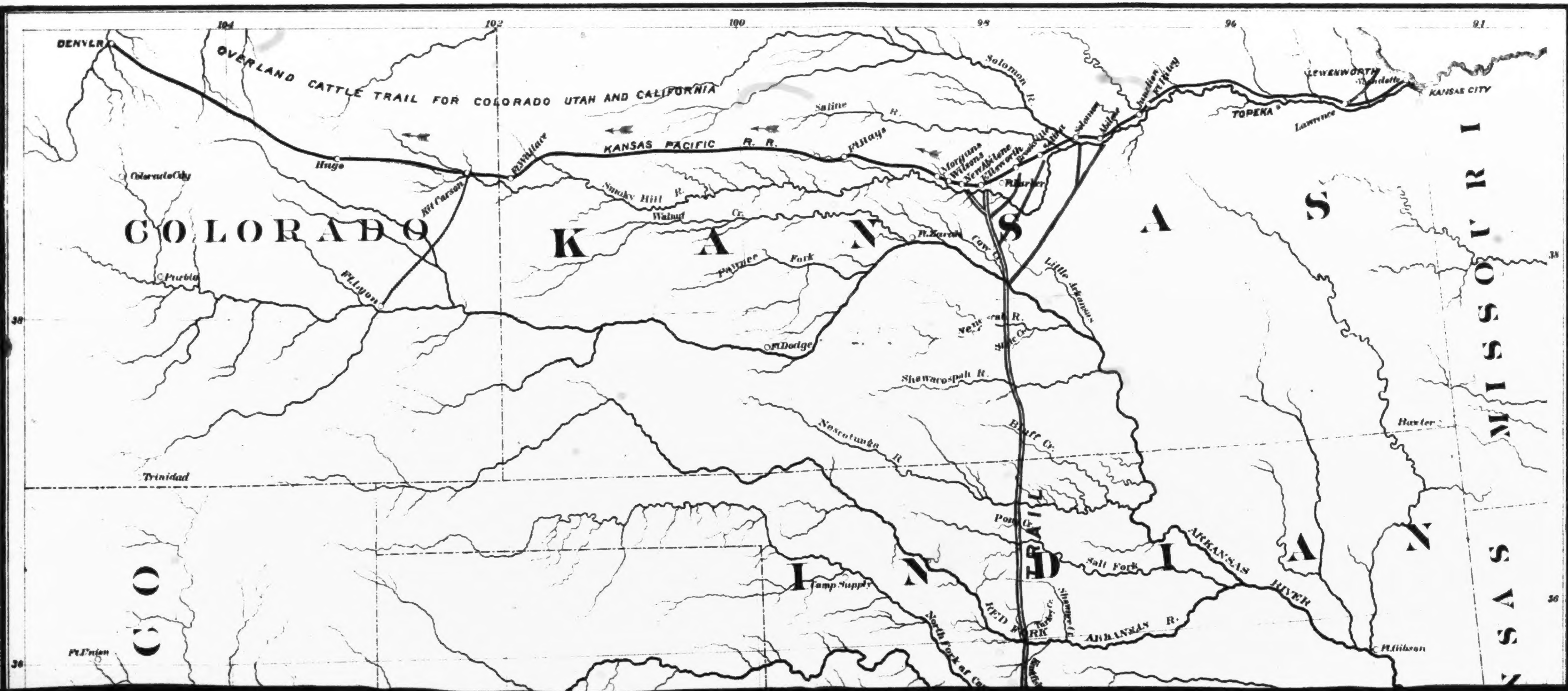
Returning to the "Desert," we observe broom corn from Ellis, as fine as any we meet with in the Hall; wheat and millet from Abilene, long, strong straws, with well-filled heads. A squash from the same place, which measures about ten inches from blossom to stem, and eighteen the other way, and another handsome squash, of the sweet potato variety, which cannot well be excelled. It bears this inscription:

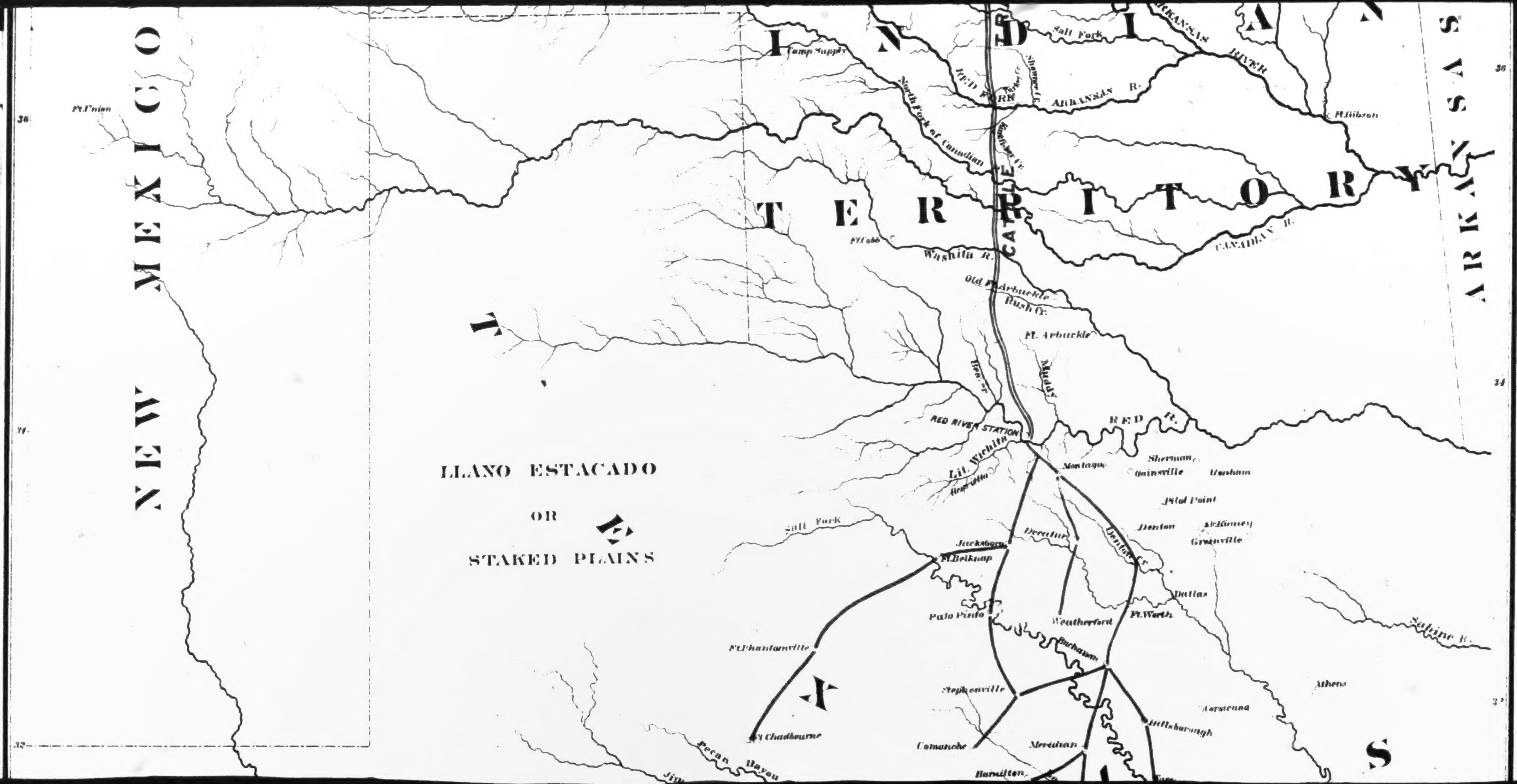
" From Ellis, Ellis County, Kansas,
" Three hundred and two miles west of the Missouri river.
" No Irrigation.
" How is this for the American Desert?
" Two thousand and nineteen feet above tide water."

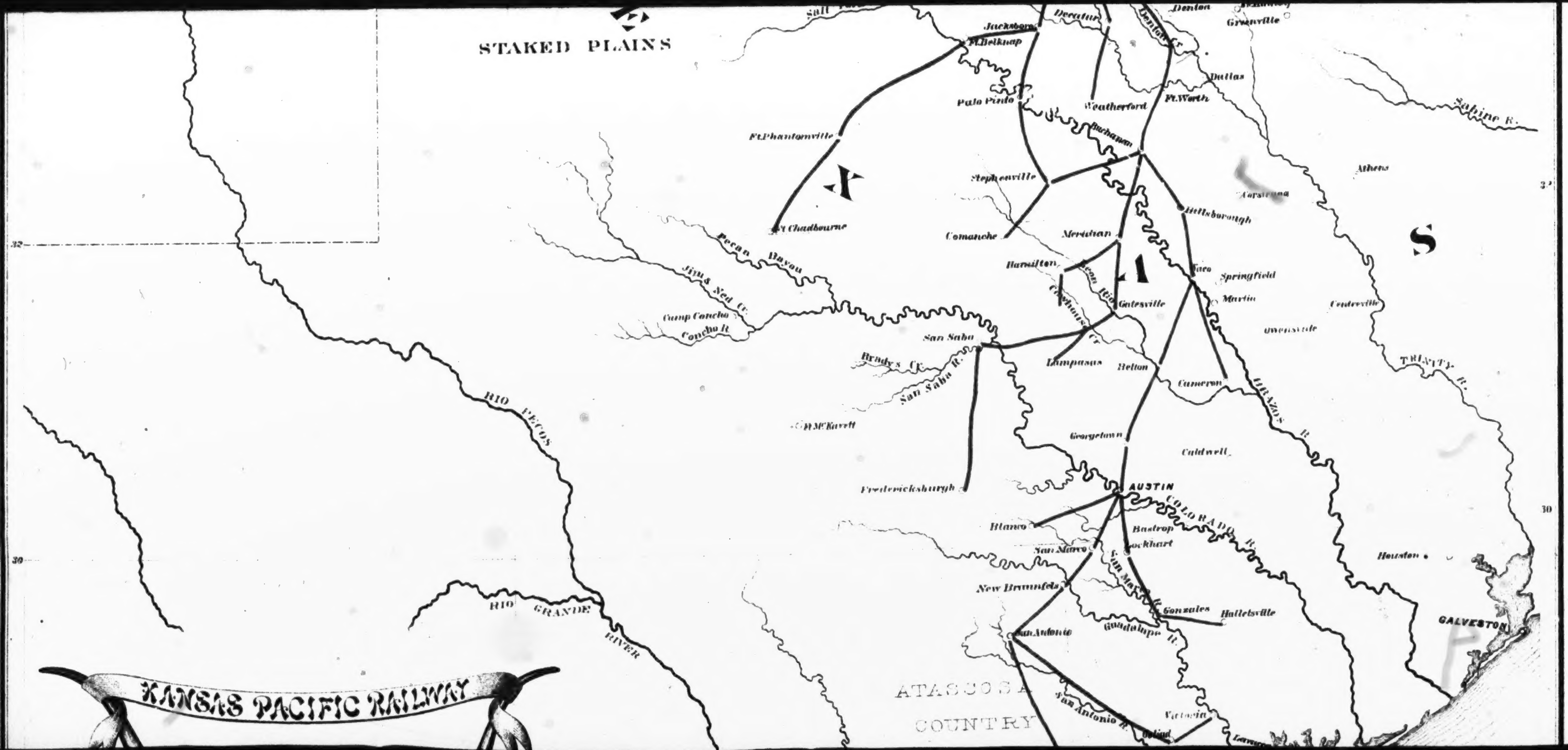
With this we close our description of these articles, with the single remark that Kansas City may even rejoice that she has such a "desert" at her front door, and that the Kansas Pacific has reason to feel proud of the products of the soil along its line. The time has now come when the old ante-diluvian idea of a desert between the Missouri river and the Rocky Mountains west of Kansas City is very effectually exploded, and the time is rapidly coming when the country heretofore so represented, will teem with its millions of happy and prosperous population, who will derive their wealth from this desert soil.

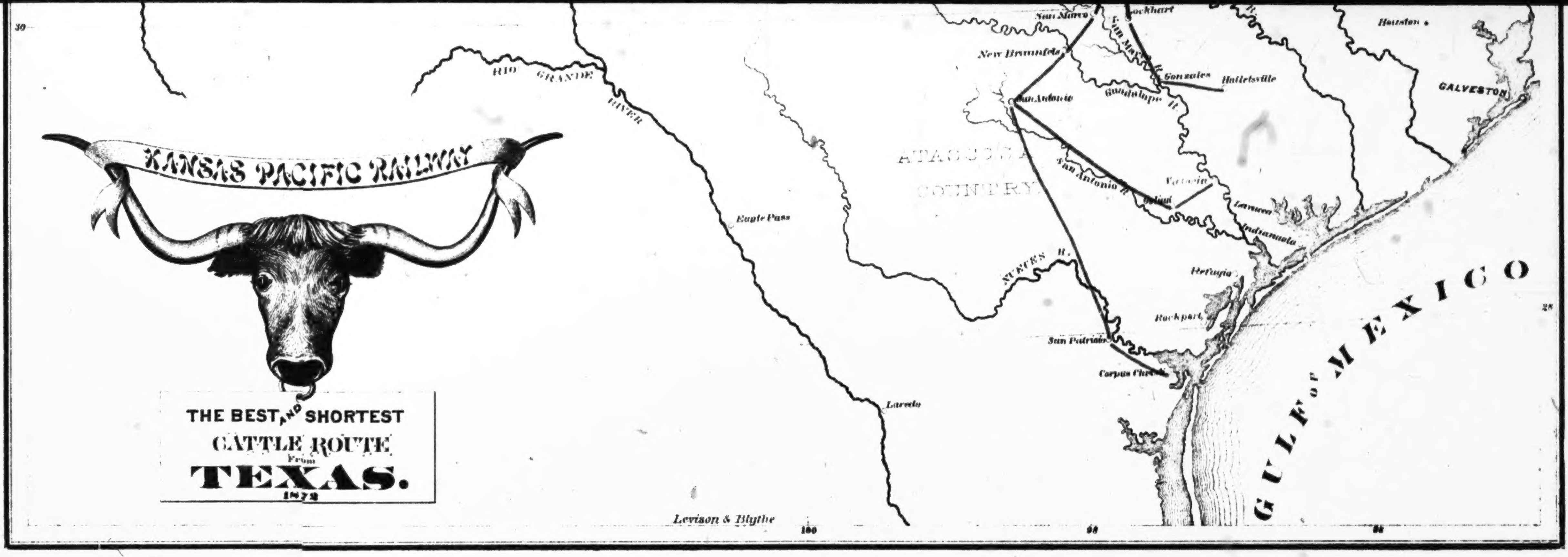
Added to the above mentioned products were shown two buffalo calves, six months old, from Ellis, and a cage of prairie dogs. The calves were tied inside the rail which fronted the display, and, being quite tame, fed from the hands of the visitors, and drew an immense crowd from morning till night.

The Records of the Agricultural Bureau at Washington, show that Kansas has grown a larger amount of wheat to the acre than any other State; and at the great Fruit Fairs held at Philadelphia, Boston, Albany, Lowell and Richmond, *Kansas took the first premiums for Fruit, with all the Northern, Middle, Western and Southern States for competitors.*


104
102
100
98
96
94
DENVER
OVERLAND CATTLE TRAIL FOR COLORADO UTAH AND CALIFORNIA
KANSAS PACIFIC R. R.
Hugo
Colorado City
Kit Carson
Ft. Wallace
Ft. Hays
Saline R.
Solomon R.
Smoky Hill R.
Walnut Cr.
Pawnee Fork
Morgans
Wilsons
New Abilene
Ellsworth
Brookville
Salina
Solomon
Abilene
Junction
Ft. Riley
Ft. Harker
LEWENWORTH
Wyandotte
KANSAS CITY
TOPEKA
Lawrence
COLORADO
K A N S A S
MISSOURI
Pueblo
Ft. Lyon
Ft. Dodge
Ft. Zarah
Cow Cr.
Little Arkansas
Nenescah R.
Slate Cr.
Shawacospah R.
Nescotunga R.
Bluff Cr.
38
Trinidad
Pond Cr.
TRAIL
Salt Fork
ARKANSAS RIVER
ARKANSAS R.
RED FORK
Turkey Cr.
Skeleton Cr.
North Fork of Canadian
Camp Supply
I N D I A N
Baxter
Ft. Gibson
36
Ft. Union
CO
ARKANSAS


INDIAN TERRITORY
NEW MEXICO
ARKANSAS
TEXAS
LLANO ESTACADO OR STAKED PLAINS
CATTLE TRAIL
Ft. Union
Camp Supply
Salt Fork
ARKANSAS RIVER
ARKANSAS R.
RED FORK
Turkey Cr.
Skeleton Cr.
North Fork of Canadian
Kingfisher Cr.
Ft. Gibson
CANADIAN R.
Ft. Cobb
Washita R.
Old Ft. Arbuckle
Rush Cr.
Ft. Arbuckle
Beaver Cr.
Muddy
RED R.
RED RIVER STATION
Lit. Wichita
Henrietta
Montague
Sherman
Gainsville
Bonham
Pilot Point
Denton
McKinney
Greenville
Denton Cr.
Decatur
Jacksboro
Ft. Belknap
Salt Fork
Palo Pinto
Weatherford
Ft. Worth
Dallas
Sabine R.
Buchanan
Ft. Phantomville
Stephenville
Athens
Corsicana
Hillsborough
Comanche
Meridian
Hamilton
Ft. Chadbourne
Pecan Bayou
36
34
32


STAKED PLAINS
Salt
Jacksboro
Ft.Belknap
Decatur
Denton
Denton Cr.
Greenville
Dallas
Palo Pinto
Weatherford
Ft.Worth
Sabine R.
Ft.Phantomville
X
Buchanan
Stephenville
Athens
Corsicana
Hillsborough
Ft.Chadbourne
Comanche
Meridian
S
Hamilton
Leon Rio
A
Waco
Springfield
Martin
Centreville
Pecan Bayou
Jims Ned Cr.
Camp Concho
Concho R.
Cowhouse Cr.
Gatesville
Owensville
San Saba
Bradys Cr.
San Saba R.
Lampasas
Belton
Cameron
Trinity R.
Brazos R.
Ft.McKavett
Rio Pecos
Georgetown
Caldwell
32
30
Fredericksburgh
AUSTIN
Colorado R.
Blanco
Bastrop
Lockhart
San Marco
San Marco R.
Houston
New Braunfels
Gonzales
Halletsville
Rio Grande River
San Antonio
Guadalupe R.
GALVESTON
Atascosa Country
San Antonio R.
Victoria
Goliad
Lavaca
KANSAS PACIFIC RAILWAY



KANSAS PACIFIC RAILWAY

THE BEST AND SHORTEST
CATTLE ROUTE
From
TEXAS.
1872

Levison & Blythe

30
RIO GRANDE RIVER
Eagle Pass
Laredo
NUECES R.
ATASCOSA COUNTRY
San Marco
Lockhart
San Marcos R.
New Braunfels
Gonzales
Hallettsville
San Antonio
Guadalupe R.
San Antonio R.
Victoria
Goliad
Lavaca
Indianola
Refugio
Rockport
San Patricio
Corpus Christi
Houston
GALVESTON
GULF of MEXICO
28
100
98
96

THE GREAT TEXAS CATTLE ROUTE

FROM

RED RIVER CROSSING TO THE K. P. R. W.

BY COL. JOHN T. TRACY.

THE FOLLOWING table shows the distance, description of route, streams, crossings, camping grounds, wood and water, and trading posts, from the crossing of Red River to the Kansas Pacific Railway.

Names of Points.	*Dist. bet. Points.*	*Total Distance.*	*Description of Trail.*
Beaver Creek, Branch of.	15	15	Trail from Red River follows the divide through an open prairie, with an abundance of wood and water on the tributaries of the Beaver. The stream being small, the crossing is always good and safe. Good camping ground.
Monument Rocks, or icking Creek.......	15	30	Trail from Beaver Creek over high rolling prairie; supply of wood and water abundant for camping purposes; small stream with good crossing. Good camping ground.
Stage Station.............	15	45	Trail from Monument Rocks continues over high rolling prairie, skirting timber on both sides, passing through several groves of oak. Plentiful supply of wood and water. Good camping ground. Station located on east fork of Beaver.
Rush Creek, head of......	15	60	Trail to this point over high rolling prairie, with occasional groves of timber. Good camping ground, with plenty of wood and water.
Little Washita...........	13	73	Trail from Rush Creek greater part of the way through an old burnt Jack oak country. No water for nine miles after leaving Brush Creek. Good road and plenty of grass on the north side of Little Washita. Good ford and camping ground.
Washita River............	4	77	Trail from Little Washita over a level prairie. Good ford across the river, with rock bottom on north side. Fine camping ground on north side of river, with an abundance of wood and water.
Hills of Canadian, or Head of Walnut......	16	93	Trail from Washita over a high rolling prairie, with a plentiful supply of water on both sides. Good camping ground, with wood and water on Walnut Creek. The trail heads the stream instead of crossing it.
Canadian River..........	10	103	Trail from Walnut over a level prairie, with plenty of water on each side. Good camping ground on the south side of the river, with an abundance of wood and water. No good camping grounds on north side. Good, safe ford.
North Fork	13	116	Trail from Canadian over a high rolling prairie. Camping grounds on north side of the river, with plenty of wood and water. Good ford.

Names of Points.	*Dist. bet Points.*	*Total Distance*	*Description of Trail.*
Deer Creek	9	125	Trail from North Fork over a high rolling prairie. Sufficient wood and water for camping purposes. Good ford.
King Fisher Creek	8	133	Trail from Deer Creek over level upland prairie, with plenty of water. Good camping ground, with sufficient wood and water.
Red Fork	10	143	Trail from King Fisher Creek over level upland prairie. Water on west side of trail. Camping ground two miles beyond the ford on the north side of stream. Abundance of wood and water.
Turkey Creek	6	149	Trail from Red Fork over rolling prairie, with timber skirting east side. Small stream. Good camping ground, with plenty of wood and water. Take wood from here for camping purposes. No wood at Hackberry. Supply store at this point.
Hackberry Creek	12	161	Trail from Turkey Creek over level upland prairie, about five miles through a dog town. Good supply of water, but no wood.
Shawnee, or Skeleton Creek	9	170	Trail over high rolling prairie. Good supply of wood and water. Take wood from here for camping; none at Nine Mile Creek.
Nine Mile Creek	6	176	Trail over level upland prairie. Water sufficient, but no wood.
Salt Fork	9	185	Trail from Nine Mile Creek over a level prairie, through a dog town. Water scarce until near Pond Creek. Good camping ground at point of timber east of trail, three miles south of Salt Fork.
Pond Creek	3	188	Trail from Salt Fork over level prairie. Good camping ground, with plenty of wood and water. Small stream, but high, steep banks. Supply store at this point.
Pole Cat Creek	13	201	Trail from Pond Creek over level prairie. Water sufficient, but no wood until reaching Pole-Cat Creek. Good camp on north side of stream, with sufficient wood and water.
Bluff Creek	12	213	Trail from Pole-Cat Creek over a high rolling prairie. Water plentiful, but no wood until reaching Bluff Creek. Good camping ground on north side of the stream, one mile from crossing. Take wood from Bluff Creek for camping, as there is none between here and Shawacospah River. Supply store at this point.
Shawacospah River	12	225	Trail from Bluff Creek over high, rolling prairie. Water in abundance, but no wood until reaching the river. Good ford and camping ground. Supply store at this point.
Slate Creek	13	238	Trail from Shawacospah over rolling prairie. Plenty of water, but no wood until reaching State Creek. Good crossing and excellent camping ground on both sides of stream. Supply store at this point.
Nenescha River	12	250	Trail from State Creek over high, level prairie. Sufficient water, but no wood until reaching the Nenescha. Good camping grounds on the river, with abundance of wood and water. Supply store at this point.

Names of Points.	*Dist bet. Points.*	*Total Distance.*	*Description of Trail.*
Cowskin Creek..........	12	262	Trail from Nenescha over a high, rolling prairie, with wood and water in abundance. Good camping ground.
Arkansas River...........	6	268	Trail from Cowskin Creek over a level prairie. Crossing the best on the river. Low banks and shoal water at nearly all seasons of the year. Good camping grounds.
Cow Creek...............	21	289	Trail from Arkansas river runs parallel with Arkansas over a level prairie, with an abundance of wood and water. Good camping grounds.
Old Santa Fe Trail......	19	308	Trail from Cow Creek over a rolling prairie, with water and wood plentiful for camping purposes.
Plum Creek...............	22	330	Trail from crossing Santa Fe Trail over rolling prairie, with an abundance of water. Fine herding ground, with a wide range.
Ellsworth.................	22	352	Trail from Plum Creek over high, rolling prairie, with plenty of water. Excellent herding grounds. Wood can be obtained from Ellsworth at *prime cost* After due consideration with prominent drovers and dealers, it has been determined to make this point the principal shipping and herding depot on the road. Extensive stock yards, combining every facility for loading cattle with safety, are now completed, and in charge of one of the most experienced stock men in the West. Hotel accommodations are ample and comfortable, and supplies of all kinds can be readily obtained at reasonable prices.
Brookville	...	340	Extensive range; fine yards. Fuel at prime cost.

The following statistics in relation to the transportation of Texas cattle over the Kansas Pacific Railway, have been carefully compiled from the Auditor's office:

Total number of head transported	1867	37,400
" " " " "	1868	58,800
" " " " "	1869	51,320
" " " " "	1870	131,360
" " " " "	1871	161,320
Grand total for five years		440,200

No stronger argument than these figures could be advanced to prove, that aside from its wide-spread popularity, this is the most available and practicable route for Texas cattle.

The peculiar advantages of the old and well-known Chisholm Trail are so universally admitted that it is unnecessary to enumerate them. The abundance of grass and water; absence of flies, ticks and mosquitoes, and the abolishment of taxes heretofore exacted by the different tribes of Indians, are facts too well known to incorporate in this article.

For general information, and the convenience of drovers, a carefully compiled description of the trail, denoting camping grounds, wood, water, grass and other important facts is herewith furnished, together with a map of the country traversed by the trail, obtained from reliable authorities, showing all the streams, trading posts, etc.

While, for years to come, Abilene will still be recognized as the Great Cattle Mart of America, it has been wisely determined to encourage drovers to make Brookville and Ellsworth the principal depots for their cattle, for the following reasons: Freedom from the petty annoyances of settlers by cattle trespassing on cultivated fields; wider range, with an abundance of grass and water, and increased facilities for shipping, with extensive stock yards at each of the places named.

While competing lines will undoubtedly make strenuous efforts to divert a portion of the cattle trade from its legitimate channel, the fact has been incontrovertibly established that the trail to the Kansas Pacific is the best, the grazing grounds contiguous to the road vastly superior to other localities, and the certainty of meeting at Abilene and other points on the road, all the large dealers in stock, insure, without doubt, the bulk of the Texas cattle business for years to come to this road.

It stands to reason that when cattle can be driven from Texas to the Kan sas Pacific at an average cost of $3.50 per head, improving each day of the drive from the nutritious grass on the route, drovers will require extraordinary inducements to ship by rail three hundred or four hundred miles with the certainty of losing $2.00 or $3.00 per head in shrinkage.

Experience is a wise teacher, and the record of the past five years shows conclusively that but very few of those drovers who have turned aside from the old beaten track have realized their expectations.

Aside from the usual demand for packing and butchers' use, it is not generally known that the large number of military posts and Indian tribes in the West and Northwest depend almost solely upon Texas cattle, driven to the Kansas Pacific Railway, for their yearly supplies of beef.

For several years past, all cattle destined for Colorado, Utah, Montana and California, have been driven over the Great Overland Cattle Trail, running parallel and contiguous to the Railway. This route offers peculiar advantages to drovers on account of grass and water, and the convenience of procuring supplies from the railroad stations.

Arrangements have been perfected to furnish drovers at Brookville and Ellsworth with fuel for camping purposes at prime cost, and to transport supplies for their use at reduced rates.

Parties who drive cattle to the Kansas Pacific Railway have an outlet to New Mexico, Colorado, Wyoming, Idaho, Montana, Utah, Nevada, Oregon, and California, and the benefit of the large demand for cattle to supply the Government posts in those States and Territories, and in the States of Kansas and Nebraska.

They also have the benefit of the demand at the packing houses at Leavenworth and Kansas City. At the latter place the firm of Plankinton & Armours has just completed the construction of the largest beef packing houses in America, having facilities for packing yearly fifty thousand beeves. This, in addition to the three other houses already established, affords a demand at Kansas City for, at least, one hundred thousand beeves annually, for packing purposes.

The Union Stock Yards at Kansas City, now in operation, are conceded the best arranged west of Chicago, and have given the utmost satisfaction to shippers.

The experience of Texas cattle men along the line of the Kansas Pacific Railway during the past three years, has conclusively demonstrated that cattle can be wintered upon the buffalo or mesquit grass in and about the vicinity of Ellsworth and Brookville as economically, and in much better condition, than in Texas, so much so that leading men engaged in stock raising in Texas, are now establishing depots or ranches at these places, with a view to holding over annually, during the winter, a certain proportion of their herds. Cattle so held come out in the spring in much better condition, improve more rapidly, command better prices, and can be forwarded to market much earlier than freshly driven cattle from Texas.

The advantage of such facilities, with a dull or depressed market, is too apparent to need further comment.

The drover is never (as in Southern Kansas, where the grasses winter-kill,) compelled to sacrifice his cattle from inability to winter.

Summing up the principal advantages claimed and admitted for this popular trail—grass and water in abundance, good markets, plenty of purchasers, and unexceptionable facilities for handling and shipping cattle—no drover, having his own interests in view, will fail to drive to the Kansas Pacific Railway.

POPULATION OF TOWNS ON THE LINE OF THE KANSAS PACIFIC RAILWAY.

THE FOLLOWING table, though imperfect, will give some idea of the rapid growth of the towns, and of the vast empire, so to speak, which has been created by this great line of Railway. A very inadequate conception, however, can be formed, as it must be remembered that these towns are but the commercial centers of a belt of thickly settled agricultural country, forty miles in width, and upwards of three hundred miles in length, the enormous population of which cannot be correctly given:

	When laid out.	Population 1872.
Kansas City	1846	40,000
Wyandotte	1843	3,000
Armstrong		250
Edwardsville		200
Lenape		100
Stranger	1865	100
Lawrence	1857	12,000
Leavenworth	1854	20,000
Reno	1866	150
Tonganoxie		300

Fairmount		200
Perryville		500
Medina	1865	1,000
Newman		100
Grantville	1866	100
Topeka	1854	10,000
Rossville	1870	450
Ogden	1856	400
St. Mary's	1869	1,000
Belvue	1871	200
Wamego		1,200
St. George		600
Manhattan	1854	1,500
Fort Riley	1852	1,000
Junction City	1859	3,500
Chapman's Creek		50
Detroit	1869	
Abilene	1867	1,200
Solomon	1865	600
Salina	1858	1,500
Bavaria	1869	100
Brookville	1870	400
Fort Harker	1866	500
Ellsworth	1867	800
Wilson's	1871	300
Bunker Hill	1871	100
Fossil	1871	300
Hays	1867	400
Ellis	1869	100
Wallace	1869	200
Kit Carson	1869	300
Frontier Stations		1,500
Denver	1859	12,000
Total		119,400

KANSAS PACIFIC RAILWAY LANDS.

TREATING of the magnificent belt of land (forty miles in width) owned by the Railway Company, it were folly to assume that there are not equally as good lands owned by other companies in the south and other portions of the State of Kansas; but that those on the line of the Kansas Pacific offer superior inducements, cannot be gainsayed. It is admitted universally that these latter are as plentifully watered and timbered, as well supplied with coal, and of as rich soil as any other part of the State. Added to this, they are the cheapest—the last county put in the market ranging in price from two to four dollars per acre, which, when we remember that the buyer has five years to pay it in, seems absurdly low. Now it is well known that in a city, property on the main street or thoroughfare is the most valuable, while that on the back streets is comparatively worth far less money. So with this State. It is a huge city, as it were; the Kansas Pacific Railway is and always will be the central street, the main thoroughfare; the other roads are the back streets; and those who purchase or settle on the front street, will naturally come out ahead. This the writer advances as a common sense view of the matter. The Kansas Pacific Railway as *it is*, is nothing in comparison with the Kansas Pacific Railway as *it will be*, when it is built through Arizona and New Mexico, as it is anticipated, opening up the exhaustless mineral wealth of that region to the settler and the miner. Where will their supplies come from? From Kansas and from her main street; people do not go into out-of-the-way streets to do their shopping. The purchase of land for settlement or investment along the line is no speculation, it is a "dead sure thing." Look at Lawrence for instance, one of the prettiest and most flourishing towns on the road. Land in this vicinity was purchased fifteen years ago, at an average of about three dollars per acre, and that land is now worth fifty to one hundred and fifty dollars per acre. Go farther west, and take Dickinson and Saline counties. These lands were put in the market three years ago at an average of three dollars an acre, and in the vicinity of the railroad are now worth eight to ten dollars. Go still farther west to Russell and Ellis counties, which are now for sale at from two to four dollars per acre, and equally as good as the former *in every respect*, witness the unceasing flow of immigration, and say why there are not as good chances as there ever were for the capitalist, merchant and agriculturist.

There is only one apparent drawback to the prairie lands of Kansas, and that is the scarcity of timber; but the want of it is fully supplied by the abundance of the finest stone for building and fencing purposes, and inexhaustible coal for fuel. The impressions of leaves on the sandstones, and the petrified trunks of trees found in abundance on the prairies, testify that they were once thickly wooded. So will they be again. Experiments have proved that it is pre-eminently a tree growing country. On the prairies where the soil has been turned to build the track, may be seen a spontaneous growth of trees, and with the advance of the plow, the consequent cessation of prairie fires, and the enterprise of the cultivators of trees, these lands will be once more with their "verdure clad." Many of those who visit these lands and come from the thickly peopled Eastern States, seem at first struck with an impression of desolation when they view the immense expanse of gently undulating prairie, in many places treeless, except on the rivers and creeks. They seem unable to draw on their imagination for the houses, orchards, shrubberies and other concomitants of advancing settlements; while on the other hand Canadians who have visited them, have been beyond measure delighted when comparing them with the country where they have spent their lives in grubbing up stumps and battling with everlasting snows.

Many people have asked the question, "If your lands present such advantages as you claim, why do not Eastern capitalists or European Emigration Companies buy them up at once for investment and settlement?" The answer is this—simply because they are profoundly ignorant of the facts; the lands are not advertised in the Eastern States, and in Great Britain, Germany and Sweden, which present the finest field for inducing emigration to this country, on account of their immense surplus population, the lands are not advertised at all.

The writer has lived in Canada, and seen thousands of poor farmers who have spent their lives and destroyed their constitutions in felling timber and clearing the ground, leaving at best a miserable half-cleared farm as a legacy to their children, who, had they spent the same time and money on a half section of prairie or river bottom land in Kansas, would be healthy and wealthy in their old age. Is it not reasonable to suppose that if they were acquainted with these incontrovertible facts, there would not be an immense influx of settlers from Canada? Of course there would. Thousands of farmers who have grown-up sons would send them here to locate, and then follow when their children had settled. Eighty acres of Government land gratis! and as much more as they like to buy from the Company at three dollars per acre on five years' credit! What more could insatiate man ask? And yet no trouble is taken and no money spent to make these facts known in Canada. A good energetic worker, and a man who is thoroughly posted on every subject connected with Kansas lands, could induce an enormous emigration from England to this country. But he must be sent there to talk. A foolish maudlin sentiment of supposed loyalty prevails in that country, which induces them to send their surplus population to battle with the ferns and gum trees of New Zealand and Australia, or the snows and interminable forests of Canada, to drag out a pauper's and an exile's existence, rather than send them to America to prosper, as we prove they must inevitably do. For the capitalist there are a thousand and one ways by which he amasses a fortune; in fact, there is very little credit to be attached to a man's making money here. Stock breeding, tree and grape culture, sheep farming, milling, building, banking, etc., are all, with a judicious and careful management, straight roads to fortune.

This comatose state of affairs, however, is speedily coming to an end. The Hon. Jno. P. Devereux, Land Commissioner of the road, has put the entire sale of the lands and control of the Agents into the hands of Messrs. Harris, Abrams & Co., of Lawrence. These gentlemen have both enterprise and capital, and are "waking up" the sale of lands generally. They issue five thousand copies of a monthly paper, called the *Kansas Pacific Homestead*, devoted entirely to the subject of Kansas Pacific Railway lands and their settlement, and are advertising largely in the Eastern States and in Europe. They have appointed local agents at every town along the line, from Kansas City to Denver. These are active men, thoroughly acquainted with the country, and whose business it is to show visitors and intending buyers over the lands in their respective districts. Exploration, or Land tickets, may be purchased at the depot in Kansas City, and at all stations along the line, which give the privilege of stopping off at any station, and entitle the holder, should he purchase a quarter section of land or more, to a credit of half the amount of his fare on his first payment for the land.

Prices of the Kansas Pacific Railway lands range from two to six dollars per acre, seldom exceeding the latter figure, and in the counties west of Ellsworth county, the range of prices is from two to four dollars. They are sold on five years' credit, with six per cent. interest, payable in the following manner: One-fifth cash at time of purchase, and no more payment for two years, except the interest on the remaining four-fifths, which is paid at the end of the first year; end of the second year, one-fifth of the purchase money and the accrued interest, and so on in like manner each year until all has been paid. A discount of ten per cent. is allowed on cash purchases, or on deferred payments, if all be paid at one time, within sixty days from the day of contract. The following example will illustrate the mode of payments on a credit sale:

EXAMPLE.—Eighty acres, at four dollars per acre, would require a cash payment of sixty-four dollars, or one-fifth the total amount at time of purchase, and the remaining four-fifths would be payable as follaws:

	Principal.	Interest.	Total.
End of 1st year	$——	$15 36	$15 36
" 2nd "	64 00	15 36	79 36
" 3d "	64 00	11 52	75 52
" 4th "	64 00	7 68	71 68
" 5th "	64 00	3 84	67 84

The same land could be purchased for $288, ready cash. The Land Grant Bonds of the Company are taken at par of principal and accrued interest in payment for the lands.

When payment in full has been made, a deed of general warranty is given to the purchaser, conveying the land in fee simple, and free of all incumbrances.

The form of contract is as follows:

NO.——

LAND DEPARTMENT
OF THE
KANSAS PACIFIC RAILWAY COMPANY.

THIS AGREEMENT, made this------day of------, in the year 18--, between the Kansas Pacific Railway Company of the first part, and---------------- of------------, of the second part, Witnesseth: That in consideration of the stipulations herein contained and the payments to be made as hereinafter specified, the first party hereby agrees to sell unto the second party, the ----------------of Section No.----, in Township No.----, of Range No. ------, of the----Principal Meridian, containing, according to the United States survey,------------acres, be the same more or less, for the sum of---- ------dollars, with interest annually, at the rate of----per cent. Payment has been made and received of..........dollars, and the remaining principal, with the annually accruing interest, shall be paid at the General Land Office of the first party, in......annual payments, at the time and in the manner following, that is to say:

	Day.	Month.	Year.	Principal.		Interest.		Amount.		Remarks.
1st Payment,	....	....	.....	....	...	......	...	......	...	....
2d "	.....	......	.....	....	...	......	...	......	...	....
3d "	......	....	.....	....	...	......	...	......	...	....
4th "	......	....	......	....	...	......	...	......	...	....
5th "	.....	....	......	....	...	......	...	......	...	....

And the second party hereby agrees that......will make punctual payment of the above sums as each of the same respectively becomes due, and that........will regularly and seasonably pay all such taxes and assessments as may hereafter be lawfully imposed on said premises. And it is further agreed, that when any part of these premises shall adjoin the right of way of this Company, the party of the second part, ...legal representatives or assigns, shall erect (as soon as the road is opened along or through the same) and maintain a good substantial fence, sufficient to turn stock, and this agreement shall be one of the covenants in the deed to be made, and to run with the land.

In case the second party, ... representatives or assigns, shall pay the several sums of money aforesaid, punctually and at the times above limited, and shall strictly and literally perform all and singular....agreements and stipulations aforesaid, after their true tenor and intent, then the first party will cause to be made and executed unto the second party,.... heirs or assigns (upon request at the General Land Office of the first party and the surrender of this contract) a deed conveying said premises in fee simple, with the ordinary covenants of warranty, reserving, however, a strip of land one hundred feet wide, to be used by the first party for right of way or other railroad purposes, where the road is located on the premises. And it is hereby agreed and covenanted by the parties hereto, that time and punctuality are material and essential ingredients in this contract. And in case the second party shall fail to make the payments aforesaid, and each of them, punctually, and upon the strict terms and times above limited, and likewise to perform and complete all and each of ....agreements and stipulations aforesaid, strictly and literally, without any failure or default, then this contract, so far as it may bind said first party, shall become utterly null and void, and all rights and interests hereby created or then existing in favor of the second party, or derived from----shall utterly cease and determine, and the right of possession, and all equitable and legal interests in the premises hereby contracted, shall revert to and revest in said first party, without any declaration of forfeiture or act of re-entry, or any other act of said first party to be performed, and without any right of said second party of reclamation or compensation for moneys paid, or service performed, as absolutely, fully and perfectly as if this contract had never been made.

And said party of the first part shall have the right, immediately upon the failure of the party of the second part to comply with the stipulations of this contract, to enter upon the land aforesaid and take immediate possession thereof, together with the improvements and appurtenances thereto belonging. And the said party of the second part covenants and agrees that ----will surrender unto the said party of the first part the said land and appurtenances, without delay or hindrance, and no court shall relieve the party of the second part from a failure to comply strictly and literally with this contract.

And it is further stipulated that no assignment of the premises shall be valid unless the same shall be indorsed hereon, and that no agreements or conditions, or relations between the second party and----assignee, or any other person acquiring title or interest from or through----shall preclude the first party from the right to convey the premises to the second party or---- assigns on the surrender of this agreement and the payment of the unpaid portion of the purchase money which may be due to the first party.

IN WITNESS OF WHICH, the Kansas Pacific Railway Company has caused these presents in duplicate to be signed by the Commissioner and the Secretary of the Land Department under the seal of said Company, and the second party has hereunto set----signature, on the day and year first above written.

------------------------*Commissioner.*

COUNTERSIGNED, ------------------------------------

------------------------*Secretary.*

FORM OF ASSIGNMENT.

I,------------the within named purchaser, for and in consideration of ----------dollars, to me in hand paid, do hereby sell, assign and transfer all my right, title, interest and claim in and to the within described tract or parcel of land, unto-----------, of-----------, County of-----------, State of-----------, ----heirs and assigns forever. And I hereby authorize and empower the Kansas Pacific Railway Company to receive from-----------, the said-----------, any and all money or unpaid balances due on the within contract to said Company, in part consideration for said land, and upon the final payment of the purchase money, and a full compliance with all the requirements contained in the within agreement or contract, to execute or cause to be executed to--------, the said-----------, ----heirs and assigns, a deed for said land instead of to me.

Given under my hand and seal this------day of------A. D. 18--

----------------------- { SEAL. }

State of------------ } ss.
------------ County }

Before me---------------- in for said county, this day, personally came, -----------personally known to me to be the same person who executed the foregoing assignment, and acknowledged the execution of the same.

Given under my hand and seal of office, this------day of------, 18-- ------------------------

NOTE.—The acknowledgment should be taken before a Justice of the Peace if the parties reside in the county where the land lies, or if out of the county, before the Clerk of a Court of Record, or a Notary Public, who has a seal of office, or a Commissioner of deeds for the State of Kansas.

Deeds will be made to the assignee, if executed as above, without any additional expense, WHERE NOTICE IS GIVEN TO THE LAND DEPARTMENT before the deed is executed to the original purchaser.

It is anticipated that next spring a large number of Colonies will be organized for settlement on the above lands, and in view of the fact, it may be well to give a few hints which may eventually prove useful to the promoters of these enterprises.

In the first place there must be a direct organization, headed by a President, with a Vice-President, Secretary, and Treasurer; these should be old and experienced men, beyond reproach, and men who are well known as such to the entire community. An entrance fee of say ten dollars should be charged, which will be used in erecting temporary dwellings at location, etc. A Locating Committee should then be selected, composed of three men, and on the judicious selection of this Committee depends nearly everything. They should be *practical farmers* and *stock raisers*, and of *unimpeachable honesty*. This latter is an indispensable trait, as on their arrival they will be pounced on by "scalpers" land-sharks, *et hoc genus omne*, and whiskied, feted, have offers of money, town lots, etc., and, in fact, every inducement will be held out to them to "sell" the people they represent. They should not be *young* men who think more of riding over the country on railroad passes, shooting buffalo, and having a good time generally, than attending to the interests of their colony. It should then be decided by the Committee on what line of railway they propose to settle, and the Locating Committee should be instructed to proceed there *direct*, to examine the lands, and make themselves thoroughly conversant with the country and its facilities for agriculture, stock raising, sheep farming, manufacturing, trading, etc., and then if not satisfied, to look elsewhere.

The best location for a colony is on the line of railway, where they can lay out their town, and in the centre of a body of land open to homestead and pre-emption, and purchase from the railway; they can then secure a solid tract, free from the encroachments of speculators and non-members, have a ready market for all their produce, form the nucleus of a large settlement, and eventually own very valuable town property. This is the object of a colony. Individual settlers will not locate, as a usual thing, in the frontier country, ten or fifteen miles from a settlement, especially men with families; but a colony has its own society, and to such a body the individual settlers will be drawn, swelling its numbers and its revenue. The location having been selected, the unmarried men, and those who can conveniently leave their families, should then proceed to that point and have the town laid out, erect temporary dwellings, lay in a stock of provisions, and make preparations to receive the main body. This is a general sketch of the proper course to be pursued, and if carried out, will never result in failure. Few should ever join a colony of this sort unless they have money enough to build a shanty, buy a yoke of oxen or a mule team, and carry them through the first year. Pauper colonies never succeed; colonies raised in large cities rarely do. The organization should be composed of hardy agriculturists, with a fair sprinkling of mechanics, and a few men of capital, who have their hearts in the enterprise; such a colony will prosper at once. The remaining difficulty will exist in bringing the colony to their destination.

From their arrival in the State westward, they will be harassed and tormented by land "sharks." These will whisper in the ears of the green ones, that they are going to a tract of sand hills, where there is neither water nor fuel; that they are being deluded, swindled, and that *theirs* is the station they should get off at. Then emissaries from the Texas cattle faction will mingle with the people, represent themselves as "old settlers," and declare that "nothing can be raised in that country," and will probably stay with the party a few days taking every opportunity to create distrust and "stampede" them. And what is the reason of this? Simply that the "sharks" have lands for sale on commission, and care not about breaking up the party if they can only sell a few acres of land; the Texas cattle men are opposed to the country being settled, because they are driven further west and deprived of free grazing.

The Kansas Pacific Railway Company is heavily interested in the settlement of colonies along their line, and will give every aid and inducement. To that end special freight and passenger rates are provided, and in many instances a free grant of sufficient land for the town site has been given to colonies. One very important matter that should be attended to by the colony committee is the purchase of lumber, which can be bought at Hannibal, Mo., on the H. & St. J. R. R., and shipped to points two hundred and fifty to three hundred miles west of Kansas City, at a saving of at least twelve dollars per thousand feet, on the cost at those points. Provisions, stoves, agricultural implements, etc., can be purchased at Wilson's Creek and Russell, in Russell county, on the outskirts of the settlements, at an advance of from five to ten per cent. on Kansas City prices; this is owing to the extremely low freight rates given to traders and settlers in those districts.

One thing in conclusion, is to be particularly remembered. The Kansas Pacific Railway has a *larger* and *cheaper* body of unoccupied lands to select from, and can accommodate more colonies than any railway west of the Mississippi. Messrs. Harris, Abrams & Co., are General Agents for the sale of Kansas Pacific Railway lands. All sales are incepted by them, and consummated by Judge Devereux, the Land Commissioner. The local agents employed by H., A. & Co. are:

E. T. Lansing, Kansas City.
Baker & Smith, Wamego.
G. Zwanziger, Alma.
O. F. Searl, Solomon.
Eaton & Olney, Lindsay.
E. Honek, Wilson.
N. Daniels, Hays.
Jas. Hall & Co., Leavenworth.
W. E. Webb, Topeka.
N. Taylor & Co., Manhattan.
Jno. W. Berks, Salina.
H. F. Hobsman, Ellsworth.
B. Pratt, Fossil.
Harbough & Corbett, Bunker Hill.
Jno. C. Henery, Ellis.

The Land Department of the Company is also situated at Lawrence, Judge Devereux being Commissioner, and Samuel J. Gilmore, Esq., Secretary.

Parties arriving in Kansas City, and who mean business, can get every information concerning the land by applying at the General Ticket Office, Broadway. BEVERLEY R. KEIM, Esq., General Ticket Agent, has in his office a geological cabinet, specimens of cereals and farm produce from Kansas and Colorado, and also a fine collection of stuffed birds and animals, showing the different species of game to be found along the line of the Kansas Pacific Railway. Parties wishing information on all the above subjects will address Messrs. HARRIS, ABRAMS & Co., Lawrence, Kansas, who will furnish maps, circulars, and every thing required.

ADDENDA.

OFFICERS OF THE DENVER PACIFIC AND DENVER & BOULDER VALLEY RAILWAYS.

ROBERT E. CARR	President, Kansas City.
EDMUND S. BOWEN	General Superintendent, Kansas City.
S. T. SMITH	Auditor, Kansas City.
D. H. MOFFATT	Treasurer, Denver.
R. R. McCORMICK	Secretary, Denver.
C. W. FISHER	Assistant Superintendent, Denver.
BEVERLEY R. KEIM	General Passenger Agent, Kansas City.
T. F. OAKES	General Freight Agent, Kansas City.
L. H. WAUGH	Superintendent of Machinery, Armstrong, Kansas

PLATTEVILLE.

ONE OF the most desirable points for the farmer is Platteville, on the Denver Pacific Railway, thirty-five miles north of Denver. The "Platte River Land Company," of Colorado, have made a purchase of a large body of lands, have laid out the city of Platteville upon both sides of the Railway, built an irrigating ditch twenty-five miles long, and will build a fine depot, hotel, school-house and a large reception-house for new comers, (where they can eat and sleep until their own habitations are erected,) and such other general improvements as will conduce to the comfort of new comers. The Trustees of the Company are B. F. Johnson, President, of Platteville, Colorado; John Pierce and Wm. N. Byers, of Denver; Wm. A. Butters and H. J. Goodrich, of Chicago. The Company has a large capital, the Trustees are well known as active and energetic business men, and the town cannot fail to become one of the most prominent of the soon-to-be new State of Colorado. The Trustees have not as yet made any efforts to attract immigration towards Platteville, as they prefer to have every thing in readiness before so doing. In a short time they will issue a circular, setting forth in detail the advantages of their location, with terms of lands, town lots, etc.

ROSSVILLE.

Situated in the northeast corner of Shawnee county, on Cross Creek, near its confluence with the Kansas River. Is near the center of the old Pottawatomie Reserve, in the Kaw Valley, surrounded by a fine and fertile country. It sprung into existence in 1870, and has been growing rapidly ever since. Although a few hundred now number its population, it bids fair to be one of the flourishing towns of the State. The Baptist, Methodist, Congregationalist and Christian denominations, are each represented by influential pastors, in charge of congregations, and hold regular public worship. The Union Sabbath School, organized by the different denominations, has attracted much attention. The resident ministers of the place are Rev. R. L. Downing, of the Christian; Rev. William A. Clark, of the Baptist; and Rev. H. Hoyes, of the Methodist church. The pulpits of other denominations are filled frequently with ministers from abroad. The trade is well represented by competent business men, among whom are Messrs. Smith and Agniel, dealers in groceries and drugs; Messrs. Kline & Lee, groceries; Messrs. Allen & Hartzel, dealers in groceries and notions; James Cass, lumber merchant; C. W. Higginbotham, real estate agent; C. H. Hartwell, blacksmith; Baldan, McElrain & Stearns, are the millers, and have as fine a flouring mill as can be found in the State, of its capacity—three run of burrs. The Rossville Manufacturing Company is an organization incorporated in March, 1872, with a capital of $50,000. This company has large and elegant factory buildings, for the manufacture of furniture, wagons and agricultural implements, and will, during the present season, have employed over one hundred mechanics. Here we will call the attention of mechanics to the fact that very liberal inducements are being offered by this company to such as desire to locate permanently, and secure homes on the most reasonable terms. The officers of the company are: S. R. Hopkins, President; J. E. Ellis, Vice President; J. C. Boorom, Secretary; J. Cass, Treasurer; A. R. Hopkins, Superintendent of manufactures; and A. F. Navarre, Contractor.

Among the principal stock-raisers in the vicinity, are C. Cameron, M. W. James, A. Wilson and E. G. Nadeau, some of whom have the finest of imported stock, and are making extensive preparations for their business in the future. There are many excellent openings for this class of people, and the facilities are unsurpassed in the State. The broad rolling prairies, watered by delightful streams, and the low price of land, are but a few of the many inducements. Persons who desire to make inquiries, we would refer to Mr. S. R. Hopkins, who has been in the place since its foundation, and who laid the corner-stone, by the erection of a fine large depot for the Kansas Pacific Railway.

PRICE LIST.

The following will be found a correct Price List of almost every article needed by the farmer in Central Kansas:

Flour per cwt	$3 50@4 25
Graham flour per cwt	4 50
Corn meal per cwt	1 00
Sugar, N. O., ⅌ lb	11½
Crushed and powdered sugar	15½
A sugar	15
B sugar	12¾
C sugar	14
Molasses, common Sugar House	55@60
do syrup	60@64
Golden syrup	76@78
Sugar drips	85
White drips	85@95
Rio coffee, choice	22
do prime	20
do fair	19

Java	24@26
Salt, coarse, ⅌ bbl	4 00
do dairy	6 50
do do sacks	2 50
Rice	8@10
Star candles	12@15
Soap	6@9
Soda	7½@9½
Tea, best Imperial	1 40@ 1 50
Tea, second quality	90@ 1 25
Mackerel, No. 1, ⅌ ½ bbl	12 00@13 00
" do kits	2 25@ 3 00
" 2 ⅌ ½ bbl	8 50
" 2	6 00@ 7 50
" kit	1 35@ 2 00
White fish, ⅌ kit	2 00@ 2 25
Codfish	8 00@ 8 50

LUMBER—RETAIL PRICES.

Clear 1¼ 2 inch dressed one side	75 00
2d 1¼ 1½ do do	70 00
2d 1 do do	44 00@ 65 00
Clear siding do do	37 00
2d do do	35 00
3d do do	30 00
Flooring	
1st do do	58 00
2d do do	53 00
3d do do	48 00
⅞ inch ceiling, clear	35 00@ 37 00
A stock boards, 12 inch	53 00
B do do	40 00@ 45 00
C do do	45 00
Common boards	37 00@ 40 00
Joists and scantling, 16 feet and under	6 40
Shingles, A star, sawed	5 25
do No. 1, sawed	6 75
Lath, 1st quality	7 00
Doors, 2-6x6-6	3 50@ 3 50
do 2-8x6-8	2 50@ 3 75
do 2-10x-6-10	3 75
do 3x7	4 00
Sash, 8x10	80
do 9x12 and 10x12	1 00

HARNESS—RETAIL PRICE.

Heavy double draft harness, short tugs	25 00@28 00
do do do do folded pad, long tug	28 00@32 00
do do do do self-adjusting, Japan long tug	36 00@38 00
do do do do do silver long tug	36 00@38 00
Common double buggy harness	35 00@40 00
Fine do do do	50 00@75 00
Common single buggy harness	18 00@25 00
Fine do do do	30 00@50 00

FARMING IMPLEMENTS--RETAIL PRICES.

Stubble or Old Ground Plows.

	Inch cut.	*Price.*
No. 00 one horse	8½	$ 7 50
" 0 " "		9 00
" 1 single shin, short high land slide		13 00
" 3 " " low land slide		14 00
" 5 double shin, low land slide		16 00
" 7 single shin, short high land slide		16 00
" 10 double shin, high land slide		20 00
" 12 single shin, short high land slide		18 00
" 15 double shin, low land slide		17 00
" 16 " " short high land slide		20 00

Prairie Breaking Plows.

With standing coulter and extra share	23 00
do do do	25 00
do do do	27 00

Rolling coulters substituted for standing on the above breakers, $3 additional

Miscellaneous.

Single shovel plow	5 25
Double do do	6 75
Wheel walking cultivator with shield	28 00@35 00
Sulkey cultivator with shield	50 00
Sulkey hay rake	40 00@50 00
Revolving hay rake	8 00@10 00
Mowers	100 00a 140 00
Reaper and mower combined	175 00a 200 00
Two-horse double corn planters	65 00a 75 00
Grain drills	80 00a 100 00
Scotch harrow, 40 teeth	8 00
Square hinge harrow, 30 teeth	16 00
Single shovel blades, with bolts 11 fo 13 inch, each	3 00
Cutting boxes	10 00a 23 00
Farm wagons	80 00a 115 00

Threshing machines generally sold at factory prices, with freight added.

HAY, SEEDS AND GRAIN.

Prairie hay, loose, per ton	$5a 7 00
do baled do	10a 12 00

Osage seed	10a12	Wheat	75a1 00
Flax seed	75	Oats	40a50
Hungarian seed	1 50	Rye	75
Timothy seed	7 00	Barley	75
Clover seed	4 75a8 50	Buckwheat	25
Hemp seed	4 50a5 00	Corn	25a35
Bluegrass seed	2 00a4 00	Red-top seed	2 75
Orchard grass	3 50		

LIVE STOCK.

Horses	125a280	Beeves	25a 40
Ponies	30a60	Oxen, per yoke	125a175
Mules	125a200	Sheep	3a5
Cows	30a40	Hog, stock	11c
Calves	10a15	Hogs, fat, ⅌ lb	12c

Texas cattle may be had from May to October, as follows:

Yearlings	$ 5 00	Four years old	$ 20 00
Two years old	9 00	Cow and Calf	12a20 00
Three years old	25 00	Oxen, per yoke	60a80 00

PRICE OF LABOR.

Blacksmiths, per day	3 00a 5 00
Bricklayers, do	3 50a 4 00
Carpenters, do	3 00a 5 00
Clerks, per month	50 00a100 00
Dressmakers, per day	1 00a 2 00
Domestic, per month	12 00a 16 00
Farm hand do	20 00a 25 00
Harness makers do	65 00a 90 00
Laborers, per day	1 75a 2 00
Machinists, do	4 00a 6 00
Plain sewers, do	1 00a 1 50
Plasterers, do	3 50a 4 00
Shoemakers, do	2 50a 4 00
School teachers, per month	50 00a100 00
Stone masons, per day	3 00a 5 00
Tailors, do	2 50a 4 00
Wagon makers, do	3 00a 5 00

COST OF TREES.

Fruit, 20c; Shade, 20c; Evergreens, 25c; Osage Orange, $2 per thousand. Household furniture can be obtained at a slight advance over Chicago and St. Louis prices.

Denver and Rio Grande Railway.

LEAVING Denver for the Colorado Springs, Pueblo, and other places of interest, on the Southern part of Colorado, the tourist will take the Denver and Rio Grande, one of the most perfectly constructed and completely equipped Railways in the West. Its course is up the valley of the Platte river, and its tributaries, to what is called the Colorado "divide," being the "watershed," or dividing line, from which the waters flow North into the Platte, and South into the Arkansas rivers. From the summit of the divide, its course is along the valley of the streams of Monument and Fountaine qui Bouille to Pueblo, the present terminus, at which point it connects with the Arkansas Valley Branch for Canon City and the coal fields of Southern Colorado. The entire course of this line is along the base of the Rocky Mountains, and the magnificence of the scenery and novelty of the surroundings are unsurpassed. The tourist and visitor to the West should not, on any account, fail to take a trip over the D. and R. G.

LITTLETON.

The first station on the line is a town of 200 inhabitants, pleasantly situated in the valley of the Platte, ten miles from Denver; it is surrounded by a fine agricultural section of country, with abundance of water for irrigating and manufacturing purposes. At this point is located one of the finest flouring mills in the territory.

ACEQUIA

17 miles from Denver.

Located near where the canal that supplies the City of Denver with water for irrigating purposes, is taken out of the Platte river.

PLUM.

25 miles from Denver.

Is the first station in the valley of Plum creek, and is surrounded by fine grazing country.

CITADEL.

31 miles from Denver.

Citadel, or New Memphis, which is the name of the town pleasantly located on Plum creek, selected by Independence Colony for their town site. (For description see page 100.)

DOUGLAS.

Station on the R. W., 35 miles from Denver.

LARKSPUR.

48 miles from Denver.

Situated on the head waters of East Plum creek. From this station is shipped large quantities of lumber, wood, ties, etc. The largest saw mill in the territory is located near by, built by the Sloan Saw Mill Lumber Company.

DIVIDE.

59 miles from Denver.

The highest point on the Denver and Rio Grande Railway, between Denver and Canon City, 7190 feet above the level of the sea. The road runs across the corner of a small lake, the waters of which run both north and south, forming the tributaries of the Platte and Arkansas rivers.

MONUMENT.

67 miles from Denver.

This station is situated on creek of same name. Near this place is the "Wonderful Monument, or Enchanted Park."

COLORADO SPRINGS.

75 miles from Denver.

The "Saratoga of the West." For a more detailed account of the place, see page 148, 149 and 159, 160. The hotel accommodation at Colorado Springs is the very best, the large hotel at the station being under the management of Mr. McIntyre, a polite gentleman and experienced hotel keeper, from Long Branch. The rooms are well furnished and airy, and the view of Pike's Peak, Cheyenne Mountain and other scenery, to be obtained from the hotel, is most charming. From this place the Colorado Stage Company run a line of stages to Fairplay, South Fork and Granite Gold and Silver Mining Districts,

WIDEFIELD.

A station 84 miles from Denver.

FOUNTAIN.

89 miles from Denver.

Is situated in the valley of the Fountaine qui Bouille; has a population of about 200, and is surrounded by a fine country for stock raising.

LITTLE BUTTES.

94 Miles from Denver.

Side track and water tank.

PUEBLO.

118 miles from Denver.

The commercial center of Southern Colorado, county seat of Pueblo county, and situated on the Arkansas river, 40 miles from the base of the mountains, 4595 feet above the level of the sea. It is the oldest town in Colorado, contains a population of about 2500, and since the completion of the Denver and Rio Grande Railway, is growing rapidly. Some substantial brick business blocks are being erected. The Court House, just completed, is the finest building of the kind in the Territory. To this point is shipped all the Government quartermaster's and commissary stores and supplies for the Indian Department, for distribution to the different forts and posts in Southern Colorado, New Mexico and Arizona.

The Southern Overland Mail Express Company run a daily line of Concord coaches from this point to Trinidad, Maxwell's, Fort Union, Las Vegas and Santa Fe, connecting at the last named place with stages for points in Texas, Old Mexico, Arizona and California.

The Denver and Rio Grande Railway, crosses the Arkansas river at this point, and connects with the Arkansas Valley Branch, which it controls and operates to Canon City.

ARKANSAS VALLEY BRANCH.

This road runs up the valley of the Arkansas river; one of the finest valleys in the country, with abundance of water for all purposes. Thirty-six miles from Pueblo it reaches the coal fields of Southern Colorado, which is of much superior quality to any coal found in Northern Colorado, the railroad company finding that for locomotive purposes one ton is equal to two tons of the coal mined in other parts of the Territory. The company owning these coal banks are making preparations to mine 200 tons of coal every twenty-four hours during the coming winter.

CANON CITY.

160 miles from Denver; elevation, 5,300 feet.

For description of this place I will quote from Hon. W. D. Kelly, of Pennsylvania:

The situation of Canon City is most picturesque. It is at the confluence of Grape creek with the Arkansas, in a valley surrounded by mountains of great beauty, each of which seems to be the special storehouse of some of the mineral substances required by the useful arts, and through which the Arkansas breaks and flows quite angrily now when it is swollen by the melting snows of even the higher peaks. One is, however, able to form some idea of the hight of the foot-hills of this region by ascertaining that of the territorial penitentiary, or of the hotel and other buildings which stand at the base of those which bound the city on the west. Though some of these are buildings of fine dimensions, they look, as we approach them, like play-houses for children. Pueblo is the natural distributing center for the immense crop of wool and very considerable crops of corn and wheat produced in that part of the valley of the Arkansas which lies between it, the Spanish Peaks, and the Raton Mountains, but Canon City is to be the seat of great and divers manufacturing industries. The water power afforded by the Arkansas is literally unlimited, and around the city, within an area of twelve miles, are found abounding stores of coal, iron ore, petroleum, marble, siennetic porphyry, which is susceptible of exquisite polish, and other minerals, and near the river banks the hills pour forth hot and cold springs, the latter of which are delightful to the palate, and all of which are said to possess medicinal virtues. The coal is said to be the purest yet discovered in the Territory. So marked is its superiority over all others that the Denver and Rio Grande Railroad Company finds it to its advantage to have it hauled in wagons 35 miles to Pueblo, and shipped thence over the road 118 miles for use on the road, and in the company's shops at Denver, though the transportation makes it cost three times the price of coal from mines in that vicinity.

HINES & GIBSON,
THE ONLY
Gossamer Hat Manufacturers
WEST OF ST. LOUIS.

THREE DIFFERENT STYLES,
"Broadway," "Young Gent," & "Fifth Avenue."
Also extensive dealers in every variety of
GENTS' FURNISHING GOODS,
Canes, Umbrellas, Traveling Bags, Etc.
TEMPLE OF FASHION,
607 MAIN STREET, - - KANSAS CITY, MO.

SILK HATS MADE TO ORDER.

Western Stereoscopic Headquarters.

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Daily and Weekly Bulletin,

THE

LEADING REPUBLICAN PAPER OF THE MISSOURI VALLEY,

Having the LARGEST COMBINED CIRCULATION of any paper West of St. Louis.

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With proportionate facilities of all kinds required in the trade. New material of latest designs added as fast as issued from the foundries. We invite inspection of

FINE SPECIMENS OF WORKMANSHIP,

And will forward samples and prices on request.

WOOD ENGRAVING,

In all its branches, in styles and prices fully as favorable as those of Eastern cities.

BOOK BINDING.

Blank Books manufactured to order, and all work in this line executed in the highest style, at as low rates as possible with first-class workmanship.

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Bulletin Block, Fifth and Walnut Streets,

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FIRST NATIONAL BANK,

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Capital Paid in, $250,000.

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THE LARGEST CASH CAPITAL WEST OF ST. LOUIS.

We do a General Banking, Exchange and Collection Business.

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LIVERY STABLES,

Dealers in

Horses, Carriages, Buggies and Harness.

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Livery men can buy of us every article required in the business at the lowest rates.

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Hardware, Stoves, Tinware,

BLACKSMITHS' TOOLS,

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The only House West of St. Louis Employing a First-Class Wood Engraver.

Designs Furnished for all Classes of Work, and Wood Engraving Executed in the

HIGHEST STYLE OF THE ART.

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HAVING A VERY LARGE AND COMPLETE ESTABLISHMENT, WE ARE PREPARED TO EXECUTE AT SHORT NOTICE EVERY DESCRIPTION OF

PRINTING,
ENGRAVING,
LITHOGRAPHING,
BINDING

CUT AND GUMMED LABELS A SPECIALTY.

219 OLIVE STREET,

ST. LOUIS.

Detroit Carries Off the Palm!

THE

MAMMOTH SEED STORE

OF

D. M. FERRY & CO.

A Gigantic Detroit Enterprise—The Establishment Occupied by the Firm—Details of their Business Operations—Mr. Ferry's Seed Farm.

Anything pertaining to the culture of seed and the method of supplying the trade, cannot fail to be of interest to our western readers, for the most obvious reasons. We copy the following from the Detroit Tribune of a recent date:

We have frequently solicited the firm whose name appears at the head of this article, to allow us to review their business as a news item, but their modesty prevented until several eastern houses established the precedent, some of them proclaiming themselves the largest seed houses in the world. We have long known that this firm was doing an immense business in their line, but had no idea, until we visited them, that Detroit could boast of a Seed Establishment—certainly the equal, and, we think (by comparing stasistics we have gathered) by odds, the largest establishment of the kind in America. The following is the result of information courteously furnished by members of the firm, and the observations of a reporter of "The Tribune" who recently visited the establishment:

COMPOSITION OF THE FIRM.

The house was established in 1856, under the style of M. T. Gardner & Co., Mr. Ferry being an equal partner at its organization. The struggle for mere existence was long and severe, and for several years it was questionable whether the business would prove an ultimate success or not, as its growth was so imperceptible that it was often impossible to foretell on which side of profit and loss account the annual balance would appear

On Mr. Gardner's retiring, Mr. Ferry took his position at the head of the house, and by industry, business skill and just dealing, succeeded in establishing its financial position. Several minor changes in the firm occurred up to 1867, when the firm of D. M. Ferry & Co. was formed, under whose auspices the business has reached its present gigantic proportions. The firm is composed of D. M. Ferry, H. K. White and C. C. Bowen, all of whom are comparatively young men.

Their business is justly their pride, and they devote their whole time to it with an enthusiasm that has achieved the greatest success.

THEIR WARE-ROOMS.

They occupy four stores of the four-story block corner of Woodward and Grand River avenues, (excepting the cellar and first floor of No. 205 Woodward avenue). They also have a bridge extending across the alley to the Preston block, where they occupy six rooms. They also use exclusively for storage their three-story seed house on Grand River avenue, making a total of twenty-four different apartments, most of which are one hundred feet deep, and many of which have an extra floor suspended between the regular ceiling and the floor which nearly doubles their capacity. This immense quantity of room would seem sufficient to store seeds enough to supply the world, but the firm arrange to have only a portion of their crops and importations delivered at one time, on account of their inability to store them.

The establishment is divided into many departments, each one independent, controlled by its own foreman, and occupied by its own class of employees, men, boys or girls. To one passing through these departments, no doubt longer remains as to the immense extent of the business. Every person in the establishment, from the partners to the youngest employee, is constantly busy. With all the great force employed, and the admirable system with which affairs are managed, the most constant industry and activity are required to meet the demands of the trade, and the departments are like the hives of busy bees, where idleness or an opportunity for idleness is hardly known.

THE PRINTING DEPARTMENT.

As we entered the printing department and observed the long line of presses on one side of the room, busy adding to the millions of impressions required annually, and a score of girls counting and packing away the same, and in another part of the room noticed a man busily engaged cutting paper with a ponderous machine, we almost imagined ourselves in a printing and publishing house, instead of a seed store. The foreman of this department informed us that during the busy season a duplicate set of hands are employed, and that the presses are kept running day and night in order to meet the requirements of the immense trade.

Their paper is mostly manufactured for them, as they require a definite color and size, and, further, save the dealer's profit by purchasing of the manufacturers. This rule they strictly follow throughout their entire business, discarding middlemen, and purchasing directly of the producers. The paper they use annually is a large item, and they seldom order less than ten tons of the leading lines at once. Often three times that quantity is being made for them at one time.

THE FLOWER SEED DEPARTMENT

Deserves especial attention. As this is an age of culture and refinement, the tendency is to admire the beautiful in whatever form it may be found ; and but a few forms of beauty have more devotees, especially among the ladies, than choice flowers. Messrs. Ferry & Co. are alive to this fact, and are supplying this demand. Their selections embrace the choicest the world affords. They supply themselves mainly from the most celebrated florists of Europe, and where two qualities of the same variety of seed are offered. they invariably take the best at whatever cost. They showed us some choice varieties from Prussia, which cost here, including duties, at the rate of $8,000 per pound. They have about one thousand varieties, including all new ones of known merit. In addition to the large quantity of flower seed which they send out by mail, they put up complete assortments in elegant black walnut boxes for merchants ; thus, in nearly every town throughout the country where their trade extends, these choice seeds, bearing the imprint of D. M. Ferry & Co., can be found, enabling lovers of flowers to supply themselves at their own doors.

THEIR IMPORTATIONS.

We are informed by the Custom-house officials that this firm is one of the heaviest importing houses in Michigan. We have been shown invoices amounting to thousands of pounds sterling from the largest and most celebrated seed-growing establishments of England, France, Holland and Germany. Many varieties of vegetable and flower seeds cannot be successfully grown in this climate, and therefore Europe is brought into requisition to supply the deficiency, and the Atlantic cable is often used to communicate with a dilatory shipper, or to add an after-thought to some large order. A casual observer would hardly imagine, as he examines the smallest assortment of seeds put up by this house, that it embraces the products of nearly every country and climate on the face of the globe.

All their choicest and many varieties of peas they import from England, and have thousands of bushels of standard varieties grown for them in Canada.

THE SHIPMENTS OF THE HOUSE.

The shipments of goods by the firm clearly denote the extent of their trade. An examination of their books shows that during the past winter they have supplied over sixteen thousand merchants with complete assortments of seeds for retailing this spring, and many of them are regular seed dealers and require large stocks in bulk. Over sixty thousand boxes of different sizes, and some of them elegantly designed and finished, have been used in filling these orders, the cost of which alone before they are filled with seeds is over $40,000. The above shipments have been made during the past few months. Of course their aggregate annual shipments are very much more. On an average over a car-load (of ten tons) of seeds pass through the doors of their warehouse every day in the year.

QUALITY OF THE STOCK.

The best commentary on the quality of the seeds this house sells, is the immense success of their business. They value their reputation more than gold, and it has been a great lever in building up and extending their trade. Nearly all the merchants whom the house supplied with seeds fifteen years ago are still supplied by them, and thousands who have used D. M. Ferry & Co.'s seeds, and have emigrated to new States, inquire for them at the stores in the localities to which they have removed, and the merchant, ever anxious to supply goods in demand, orders—and thus their trade is increased and extended until in nearly every town of importance throughout the country a supply of these seeds can be found.

MR. FERRY'S SEED FARM.

Any one who has driven out on Grand River Avenue, in the month of June, has noticed the fine seed farm of Mr. Ferry, near the city limits. In that month most of the crops are in blossom, and the broad acres that stretch out before the visitor, blocked out and bounded by roads crossing each other at right angles, resemble an immense flower-garden. A few weeks later and the flowers have disappeared, and one beholds instead of them waving fields of ripened seed, and an army of workmen gathering the crops into the large curing and drying houses constructed for that purpose. A few years ago Mr. Ferry purchased there a comparatively small farm, and has since, as the trade required, added acre after acre and field after field to it, until he now has a plantation extending one mile in frontage on Grand River avenue, and a mile in depth to the Joy road, including several hundred acres of as choice land as there is in Michigan. Preliminary to its appropriation to seed growing, each field is thoroughly tile-drained, and thoroughness in cultivation and applying fertilizers has never failed to bring a large return of seed of superior quality, not obtainable by indifferent cultivation on poor or undrained land. Mr. Ferry spends a portion of nearly every day during the growing season at the farm, exercising a general supervision over it, and a practical and efficient seed-grower, well informed as to the requirements of the horticulture of this age, superintends the details.

CONTRACTS WITH OTHER GROWERS.

In addition to the seeds grown upon this farm the firm have heavy contracts extending for a term of years with many experienced seed-growers in different parts of the United States and Canada. Messrs. Ferry & Co. furnish the stock seed, and a member of the firm visits these growers at the proper season, inspects the crops, and, if satisfactory, accepts them All seed thus obtained is known to be of first quality. A diversity of soil and climate is required to perfect the almost innumerable varieties they offer for sale, and this requisite is taken into account in locating these contracts.

The very large requirements of this house enable them to control the entire crops of some of the largest and best growers in the country, and thus they reap a material advantage over smaller houses.

THEIR MAILING BUSINESS

Has increased very rapidly, and this feature now nearly equals their entire business nly a few years since. D. M. Ferry & Co.'s annual catalogue is anxiously looked r every spring by thousands of their patrons throughout the country, and selections are made and forwarded with the money, and the amount in seeds is returned to them, so that the most remote locality can be supplied as easily as the most cenral metropolis. A large force of employees are required to attend to the details to this department, and during their busiest season a dray is required to convey their mail to the post-office.

THEIR PUBLICATIONS.

Messrs. Ferry & Co. publish annually, and send FREE to all applicants, the following catalogues, viz:

In January—Illustrated, Descriptive and Priced Catalogue of Vegetable, Agricultural and Flower seeds.

In January—Wholesale Trade List of seeds in bulk, in large quantities, for merchants only.

In January—Descriptive Catalogue of Flowers, containing complete directions for their cultivation.

In February—Catalogue of seeds put up in packages, colored packets, and papers, including seeds usually contained in the boxes they furnish merchants throughout the country.

In July—Illustrated, Descriptive and Priced Catalogue of choice Dutch bulbs, and dried natural and everlasting flowers.

The first mentioned catalogue deserves special notice. It is printed on beautifully tinted paper, and contains 162 pages and eighty engravings. They have studied utility rather than display in preparing this work, and we do not hesitate to pronounce it one of the most complete, comprehensive, useful and instructive seed catalogues we have yet seen. It is almost indispensable to gardeners, farmers and florists.

EXTENT OF THEIR TRADE.

The territory over which the business of this firm extends, is very great, but the bulk of it is concentrated in the western, northwestern and southern States and Canada. We can only bound its extreme limits by the Atlantic on the east, the Pacific on the west, Hudson's Bay on the north and the Gulf of Mexico on the south. They inform us that America, in its broadest and most complete sense, is their field, as it is not unusual for their orders by mail to bear the post-marks of nearly every State, Territory and Province of North America.

OVER TWENTY TRAVELING AGENTS.

A system is practiced by this house of having a traveling agent visit every merchant whom they have supplied with trees throughout this vast territory, every season after the seed-selling time is over, to close the account of the past and receive an order for the coming season. This seems to be necessary in order to keep their large business well in hand, but it is attended with great expense, as it requires over twenty traveling men over six months in the year to perform this labor.

THE EMPLOYEES.

This enterprising firm furnishes constant employment for about two hundred girls and seventy-five men and boys, and during the busy season extra assistance is required. The girls are mainly engaged in labeling boxes, making paper bags, and putting up seed. Many branches of skilled labor are represented among the men employed, viz: carpenters, coopers, printers, painters, etc. As a rule the mechanics and girls work by the piece, and the compensation is in accordance with the labor performed. The traveling agents, when not on the road, are mostly engaged in the wholesale or retail departments, and in the offices. Messrs. Ferry & Co. pay their employees well, being willing they should share in the prosperity of the house, and the result is apparent to the observer in the contented, smiling faces everywhere seen throughout the establishment.

IN CONCLUSION,

Detroit can well be proud of the enterprise that has built upsuch a gigantic business in comparatively so short a period. Her sister citi esay excel her in some other branches of industry, but they cannotin this. Wefeel warranted in saying that in facilities for supplying everything in their line, in the quality and quantity of seeds they sell annually, and in therapid growth and extent of their trade, D. M. FERRY & CO. ARE SECOND TONOSEE D ESTABLISHMENT IN AMERICA.

KANSAS PACIFIC
RAILWAY.

THE FAVORITE, DIRECT, AND ONLY ALL RAIL ROUTE

TO

Denver,
Erie,
Boulder City,
Valmont,
Idaho Springs,
Green City,
Elko,
Marysville,
Georgetown,
Longmont,
Colorado Springs,
Greeley,
Cheyenne,
Reno,
Golden City,
Central City,
Platteville,
Evans,
Salt Lake City,
Sacramento,
San Francisco,

AND ALL POINTS IN

KANSAS, COLORADO, THE TERRITORIES, AND THE PACIFIC COAST.

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188 MILES THE SHORTEST LINE FROM KANSAS CITY TO DENVER.

210 MILES THE SHORTEST LINE TO PUEBLO, TRINIDAD, SANTA FE, AND ALL POINTS IN NEW MEXICO AND ARIZONA.

Remember that this is the Great Through Line, and there is

NO OTHER ALL RAIL ROUTE

To any of the above points.

There is no tedious omnibus or ferry transfer by this route, as the great rivers are all bridged.

PULLMAN PALACE CARS

Run through from KANSAS CITY to DENVER

WITHOUT CHANGE.

Passengers by this route have an opportunity of viewing the fine agricultural districts of Kansas, and can stop over at Denver and visit the rich mining, agricultural and grazing districts of Colorado.

Close connections made at Kansas City with all trains to and from the East, North and South.

BE SURE TO ASK FOR TICKETS

Via Kansas City and the Kansas Pacific Railway.

EDM'D S. BOWEN,
Gen'l Superintendent,

BEVERLEY R. KEIM,
Gen'l Ticket Agent,

KANSAS CITY, MO.

THE OLD RELIABLE

Hannibal, St. Joseph & Kansas City

SHORT LINE, IN CONNECTION WITH THE GREAT

KANSAS PACIFIC RAILWAY,

Forms the Great Through Route to and from

DENVER AND COLORADO.

☞ This route to and from SALT LAKE and CALIFORNIA, via **KANSAS CITY AND DENVER** possesses more attractive features to Tourists, Pleasure-seekers, Excursionists and Travelers generally, than any other, as all testify who have viewed the splendid scenery and other attractions, abounding in such profuse variety on THIS LINE.

TO AND FROM CALIFORNIA

—VIA—

KANSAS CITY AND DENVER.

That part of this route to and from Salt Lake and California (between Denver and Cheyenne), passes along the base of the Rocky Mountain Range over 100 miles. It affords an opportunity to visit Denver, Golden City, Idaho Springs, Georgetown, and the great Parks at the summit of the Rocky Mountains, in Colorado. These charming summer resorts for health and pleasure, abound in a wonderful variety of mineral springs, in grand, sublime and magnificent scenery, only equaled in grandeur and beauty by the scenery over the Sierra Nevadas and mountains west of Cheyenne, which this route also takes in, and all for the same rates of passage.

THE KANSAS PACIFIC PASSES THROUGH

THE GREAT BUFFALO RANGE,

Offering the only chance to see

Immense Herds of Buffalo from a Railroad Train.

☞ Ask for tickets **VIA QUINCY**, over **HANNIBAL & ST. JOSEPH AND KANSAS PACIFIC SHORT LINE**, the shortest and quickest, consequently cheapest and best route. Through Tickets for sale at all ticket offices. ☜

P. B. GROAT,
Gen'l Ticket Agent.

O. S. LYFORD,
Gen'l Superintendent.

THE GREAT THROUGH PASSENGER ROUTE TO AND FROM

Kansas, Colorado, New Mexico, Utah

AND PACIFIC COAST,

Is Via the Great Kansas Pacific Railway,

IN CONNECTION WITH THE OLD RELIABLE

Hannibal, St Joseph & Kansas City Short Line

VIA QUINCY.

THE ONLY LINE RUNNING

6 FAST EXPRESS TRAINS

between the Mississippi and Missouri rivers, over IRON BRIDGES, with Pullman Sleeping Palaces and Palace Day Coaches from CHICAGO, CINCINNATI, INDIANAPOLIS, LAFAYETTE, DECATUR AND QUINCY, TO AND FROM KANSAS CITY, and running entire trains between KANSAS CITY AND DENVER

WITHOUT CHANGE OF CARS,

Connecting close and direct in Union Depots with all roads in KANSAS COLORADO and the FAR WEST, to PACIFIC COAST.

This Short Route, and Connecting Great Through Passenger Lines, VIA QUINCY, over

THE BEST ROADS IN AMERICA,

Affords Passengers unequaled advantages in

THE MOST elegant and sumptuous Through Drawing Room Sleeping Palaces and Day Coaches run in the world. Trains supplied with all modern improvements to contribute to COMFORT, SPEED and SAFETY.

THE LARGEST and most convenient depots and Through Baggage arrangements in the United States, checking baggage to all points East and West.

THE GREAT rivers, all bridged, avoiding all transfers and ferriage; *securing to passengers the utmost economy.*

THE SHORTEST and quickest, consequently cheapest route; **therefore, when going to or from KANSAS, COLORADO, AND THE FAR WEST TO PACIFIC COAST, all who are posted buy tickets VIA QUINCY,** over the Short Line, as all connections are direct and perfect.

Ask for Tickets VIA QUINCY and Hannibal & St. Joseph Short Line, ☞ THE BEST ROUTE BETWEEN THE EAST AND FAR WEST. ☜ For sale at all Ticket Offices.

P. B. GROAT,
Gen'l Ticket Agent.

O. S. LYFORD,
Gen'l Sup't.

FREIGHT TRANSPORTATION

VIA THE

KANSAS PACIFIC RAILWAY,

ITS LEASED LINES

—AND—

CONNECTIONS.

TO MERCHANTS AND MANUFACTURERS

Superior Advantages are Offered

—IN THE—

SHIPMENT OF ALL CLASSES OF FREIGHT

—TO—

KANSAS, COLORADO, WYOMING,

New and Old Mexico and Arizona.

Low Rates, Careful Handling

—AND—

PROMPT TIME

ARE INSURED.

CLAIMS FOR OVERCHARGES, LOSS OR DAMAGE,

Promptly and Equitably Adjusted.

The Transportation of Live Stock

IS A SPECIALTY BY THIS ROUTE.

E. S. BOWEN,
Gen'l Superintendent,

T. F. OAKES,
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KANSAS CITY, MO.

ON TIME!

MISSOURI PACIFIC

RAILROAD!

The Old Reliable and Popular Through Express Route

From St. Louis to Kansas City

AND PRINCIPAL POINTS IN THE GREAT WEST.

It is the recognized thoroughfare from

ST. LOUIS TO CALIFORNIA

Either by way of

DENVER OR OMAHA.

THE MISSOURI PACIFIC RAILROAD IS EQUIPPED WITH

Elegant Day Coaches!
Pullman's Palace Sleepers!
Miller's Safety Platform!
Patent Steam Brake!

An Equipment unequaled by any other Line in the West.

TRY IT! TRY IT!

E. A. FORD,
Gen'l Passenger Ag't, St. Louis.

A. A. TALMAGE,
Gen'l Sup't, St. Louis.

ST. LOUIS, KANSAS CITY AND NORTHERN RAILWAY,

Formerly NORTH MISSOURI RAILROAD,

Connecting in UNION DEPOT at KANSAS CITY with the

KANSAS PACIFIC RAILWAY

—FOR—

Lawrence, Topeka, Emporia, Newton,
Junction City, Denver,

AND ALL POINTS IN

KANSAS, COLORADO,

The Territories and California.

SHORTEST, QUICKEST AND BEST ROUTE FROM AND TO

St. Louis and Chicago.

TO COLONISTS AND EMIGRANTS.

First and second-class and emigrant tickets for sale at all leading stations of connecting lines, and at Company's offices in St. Louis and Kansas City, at

THE LOWEST RATES.

STOCK AND HOUSEHOLD GOODS

Shipped at lowest rates, without change of cars, by applying at General Freight Office, 706 north Fourth street, or at North Market street Depot, St. Louis.

W. R. ARTHUR,
Gen'l Superintendent,
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Gen'l Pass. and Ticket Ag't,
ST. LOUIS.

DENVER & RIO GRANDE R'W'Y

The Direct and only Road to

Southern Colorado and New Mexico!

NOW COMPLETED TO

PUEBLO & CANON CITY,

160 MILES FROM DENVER.

PASSENGERS FOR POINTS IN SOUTHERN COLORADO, NEW MEXICO AND ARIZONA, WILL

SAVE 70 MILES OF STAGING

BY TAKING THIS ROUTE.

Passenger Trains leave Denver Daily,

Making Close Connections at Pueblo with

SOUTHERN OVERLAND DAILY STAGE LINE

FOR

Trinidad, Maxwell's, Ft. Union, Las Vegas, Santa Fe, and all the Principal Points in New and Old Mexico;

At Colorado Springs with Stages for all points in South Park and Granite Gold and Silver Mining Districts.

Close connections made at Denver with all Trains to and from the East.

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W. W. Borst,
Division Sup't.

D. C. Dodge.
Gen'l Ticket Ag't.